

CHAPTER THREE

ISSUE STATEMENTS, RESOLUTIONS AND POLICIES

I. AGRICULTURAL POLICIES

A. Issue Statement and Policy Resolution

The Dulles-North area is extensively farmed at present. Should this land use be actively preserved?

The soils in the Broad Run watershed are not the County's best agricultural soils. The presence of Dulles Airport, proximity to the Washington metropolitan area and availability of sewer/water utilities render the area particularly suitable for community and employment development. The County will accordingly encourage continued farming in the area until its orderly conversion to community and employment uses takes place. The County will also use the Dulles North area as a receiving zone for transfer of development density programs designed to preserve agricultural uses in those areas of the County which have long-term agricultural potential.

B. Policies

1. The County will encourage the agricultural industry in the area as long as local farmers wish to continue farming, but will not prohibit the conversion of farmland to community and to employment uses.
2. The County will maintain countywide assistance to the agricultural industry in the area.
3. The Dulles North area will be a receiving zone for transfer of development density for the purposes of agricultural preservation and regional recreation. The County endorses the application of TDR and Density Transfer Programs to the area.
4. The sending areas of transfer of development density will comprise those rural areas designated by both the Rural Land Management Plan and this plan, those areas designated for a regional park as stipulated in IV.B.4.a., page 60, and those areas designated in forthcoming County Ordinances.

II. RESIDENTIAL COMMUNITY POLICIES

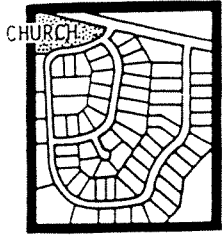
A. Issue Statement and Policy Resolution

What should be the form, size, and densities of the new residential communities and where should these be located in the Dulles North area?

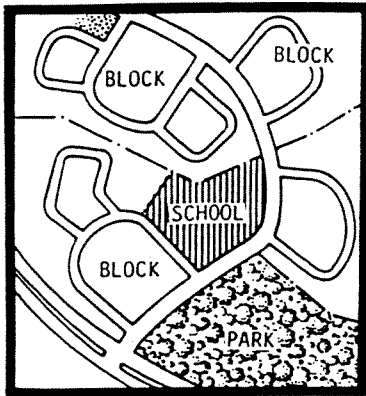
Two residential communities outside of the Ldn 65+ (*Loudness Day Night Index*) Noise Zones will be located in the Dulles North area. The new residential communities should be assembled in a hierarchy of identifiable subcommunity units. These subcommunity units range from residential blocks of 100 - 300 dwellings to a neighborhood of 3,500 - 5,000 people. Each neighborhood might consist of three to seven blocks while three or more neighborhoods might compose a residential community. Residential densities within these communities and neighborhoods will range from 1.6 to 4.0 dwelling units per net residential development acre. The neighborhoods and communities will be interrelated by transportation, recreational, commercial and educational systems and supported by a complement of public facilities and utilities (*See Figure 22, page 50*).

B. Policies

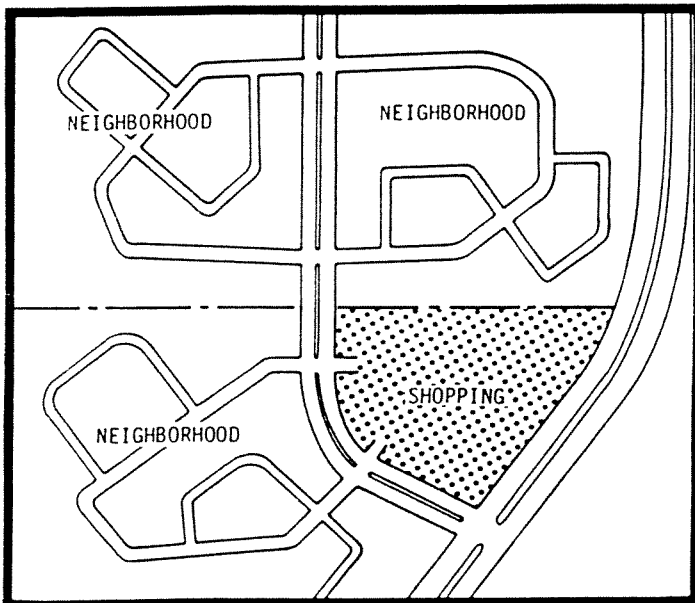
1. One residential community with a long-range build-out of 9,200 - 23,000 dwellings will surround the existing village of Ashburn while another community of 2,500 - 6,200 dwellings will be located near Royville.
2. Each of these communities will be designed as a self-contained unit of three or more neighborhoods possessing a range of housing types and a full complement of public utilities and facilities, which would include retail commercial and office functions, public sewer, water, electricity, schools, libraries, fire stations, post offices, community parks, recreation centers and other appropriate facilities.
3. Each neighborhood of 1,500 - 2,000 dwellings should be focused on a set of local public facilities which will include an elementary school and a park.
4. One local commercial center serving the two or more neighborhoods of a community should be located in a central place to serve these neighborhoods.
5. Collector and arterial roads will be designed to define and link the communities with each other, local employment areas and the metropolitan region. These collector and arterial roads should be designed to minimize disruptions of the community and neighborhoods and thus increase safety by reducing the need for



RESIDENTIAL BLOCK



NEIGHBORHOOD



COMMUNITY

COMMUNITY DESIGN CONCEPT

FIGURE 22

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school children and other pedestrians to cross major roads. Major and minor local access roads will provide the principal direct access to individual properties.

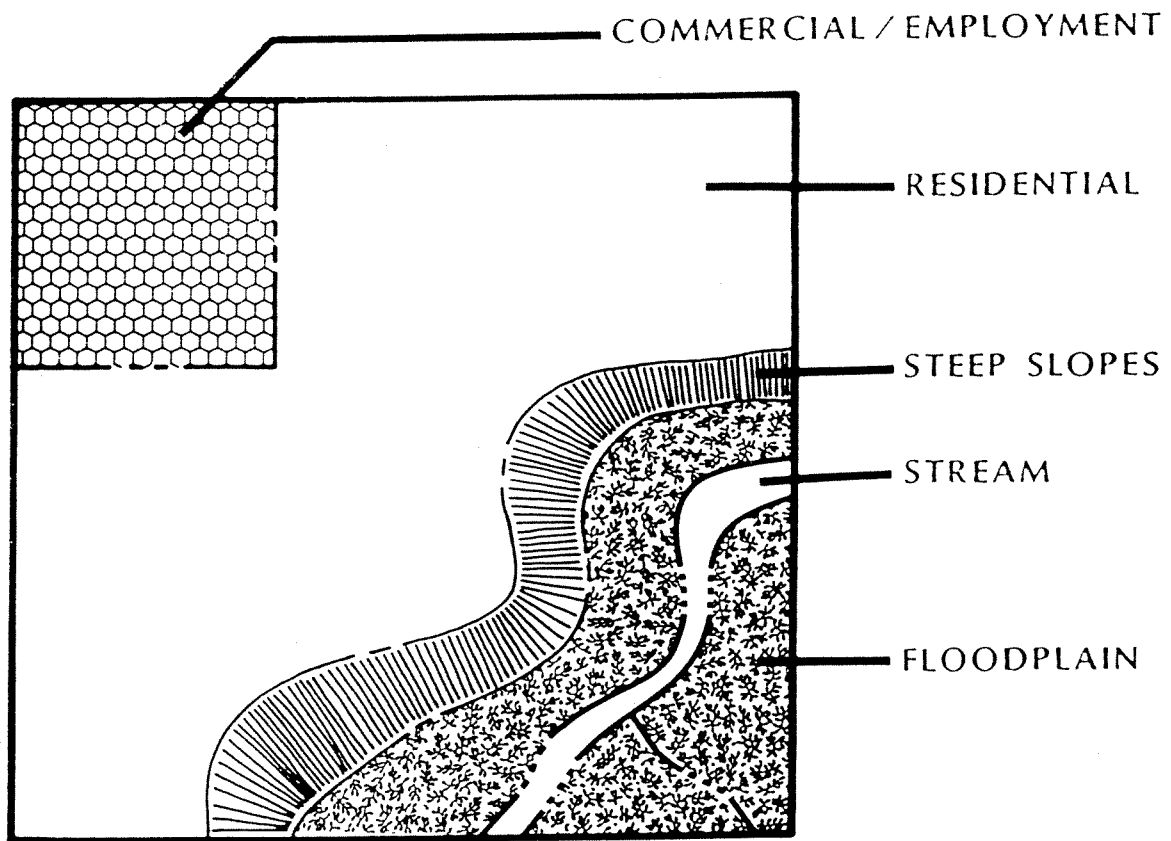
6. The new communities will be located outside the Ldn 65+ (*Loudness Day Night Index*) Noise Zones as measured on the Integrated Noise Model, Mod. 3.8 (See page 88) and projected by the Federal Aviation Authority and the Metropolitan Washington Airports Authority in their noise studies for the Washington Dulles International Airport when the facility is operating at full five-runway capacity. (See Figure 20, *Ultimate Airport Noise Contour*, page 41 and Figure 20A, *Ultimate Airport Noise Contour - 1991*, page 41A).
7. New development in and immediately around the existing Village of Ashburn will be designed to reinforce and enhance the predominantly 19th century character of the existing village.
8. The County encourages the coordinated design of neighborhoods and communities processing a full complement of public facilities and utilities. The County will establish a range of residential densities between 1.6 and 2.8 dwelling units per net acre²⁴ (See Figure 23, page 52) plus an incremental density of 0.6 dwelling units per net acre for density transfer programs and an incremental density of 0.6 dwelling units per net acre for off-site road assistance making a total maximum of 4.0 dwelling units per acre. The density granted by the County will be the function of a developer's assistance in creating a full complement of public facilities and utilities - (See Appendix A: "Public and Private Sector Policy Guidelines for the Financing of Capital Facilities and Utilities", on page 92 of this plan for further explanation regarding density and proffered assistance). The following paragraphs outline the densities which will be considered for various types of assistance:
 - a. 1.6 - 2.0 dwelling units per net acre will be considered by the County for conventional residential development with adequate road, stormwater and utility provisions and the provision of residential, block-scaled facilities such as a school path system, volleyball courts, tot lots and playgrounds.
 - b. 2.0 - 2.4 dwelling units per net acre will be considered by the County for clustered residential development with adequate road, stormwater and utility provisions, those facilities suggested for the residential blocks and the provision of neighborhood-scaled public facilities such as school sites,

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Net acre in this instance is the tract area less lands in floodplain, lands with steep slopes of 25% or over, and lands to be devoted to commercial or employment uses.

DULLES NORTH

LOUDOUN COUNTY, VIRGINIA



100 ACRE TRACT

TOTAL TRACT	100 acres
less floodplain	-10 acres
less steep slopes	- 6 acres
less commercial/employment	- 6 acres

NET RESIDENTIAL DEVELOPMENT

ACREAGE FOR DENSITY CALC. 78 acres

NET RESIDENTIAL DEVELOPMENT ACREAGE

FIGURE 23

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neighborhood or linear park sites and/or financial assistance through trust funds to support the creation of such facilities.

- c. 2.4 - 2.8 dwelling units per net acre will be considered by the County for planned community development with a full complement of those roads, utilities and public facilities of a residential block, neighborhood and community-wide character and/or financial assistance through trust funds to support the creation of such facilities as delineated in this plan.
 - d. A density increment of 0 - 0.6 dwelling units per net acre will be considered in the rezoning process by the County at stages a., b. or c. in return for significant off-site road improvements which would be of countywide benefit.
 - e. A density increment of 0 - 0.6 dwelling units per net acre will be considered in the rezoning process by the County, at stages a., b. or c. in return for developer evidence of participation in agricultural conservation or recreational efforts associated with transfer of development density.
- 9. The design of neighborhoods and the smaller residential block areas that comprise them should create living areas that are attractive, safe and stable. Lot sizes should be varied within the neighborhood and within the residential blocks and an efficient street and utility network should be provided.
 - 10. Housing types within the neighborhoods should be varied with single-family detached, single-family attached and patio houses and apartments. Housing types and lots should provide not only for the nuclear family, but also for young and older single-person households and the extended multigeneration family through the provision of space for "granny" houses, mother/daughter duplexes and similar accommodations. *(These "granny" provisions will require the addition of sections in both the Zoning and Subdivision Ordinances).*
 - 11. Housing types in each neighborhood should range between 30% - 60% single-family detached, 30% - 60% townhouses and 5% - 15% apartments. Additionally, 5% - 15% of the single-family detached house lots should be large enough to accommodate a detached "granny" house as suggested in #10.
 - 12. The new communities of Ashburn and Royville should be encouraged to incorporate.

13. The area located between the western community development portion of Royville and this plan's boundary and which is located in the Broad Run watershed, will be a rural residential sending zone. The number of units transferred will be the product of the sending area's net acreage times the appropriate density determined in II.B.8. on page 51. Sewer lines will not be extended into this area which is intended to act as a transitional buffer for the rural balance of the Broad Run watershed.

III. EMPLOYMENT POLICIES

A. Issue Statement and Policy Resolution

Where should the new employment uses be located? Where should the new warehouse/manufacturing employment uses be located?

A variety of employment uses will be designated in the Dulles North area and located to accommodate a wide spectrum of businesses ranging from high visibility, prestige offices to general employment, assembly, warehouse and manufacturing enterprises. The employment zones will be located within the Ldn 65+ Loudness Day Night Index Noise Zones and in those areas both crossed by arterial and collector roads and served by sewer and water lines designed to support such employment uses. Office/research and high technology employment uses should be located along existing and future major cross-country arterial roads while warehouse, manufacturing and repair uses should be located along the less visible industrial collector roads.

B. Policies

1. Employment land uses will be designated along Route 7, Route 28, the Dulles Toll Road (*portion located in DNAMP*), and Route 606 and the proposed Route 607/645 corridor.
2. Employment land uses will be designated in the Ldn 65+ Loudness Day Night Index Noise Zones as measured on the Integrated Noise Model Mod 3.8 and projected by the Federal Aviation Authority and the Metropolitan Washington Airports Authority in their noise studies for the Washington Dulles International Airport when the facility is operating at full five-runway capacity (*See Figure 20, Ultimate Airport Noise Contour, page 41 and Figure 20A, Ultimate Airport Noise Contour - 1991, page 41A*).
3. Employment land uses bordering Routes 7 and 28 and the proposed relocated Route 643/Dulles Toll Road Extended will be designated for office/research and high technology assembly uses.

4. Land bordering the constructed Dulles Toll Road extension will be designated employment keynote in the area east of the East Spine Road. Residential and mixed use developments are proposed for the area to the west of the East Spine Road which abuts the Toll road alignment. Suburban densities will not exceed 4.0 dwelling units per acre while employment densities will not exceed .4 FAR.
5. Land bordering Route 606 and the proposed Route 607/645 corridor will be designated for general employment uses (*e.g., manufacturing, bus/trucking repair facilities warehouse and assembly*).
6. Heavy employment uses such as metal fabrication or quarries should be buffered from residential or office/research uses by less intensive employment uses such as warehouses or by major environmental areas (*e.g., the Broad Run floodplain*).
7. Additional floor area up to 25% of allowable Floor Area Ratio will be granted by the County in return for developer evidence of participation in agricultural conservation efforts associated with transfer of development density.
8. Development of General Employment uses along Route 606 should incorporate 150 foot building set-backs from Route 606; 50 foot parking set-backs; inter-parcel access with a minimum number of entrances onto Route 606; adequate screening along Route 606 and adequate sewer and water facilities sufficient to meet Health Department approval.
9. Designate the entire strip of land designated as "airport expansion area" as general employment, rather than amending the plan for individual parcels on a piecemeal basis.

IV. COMMUNITY FACILITY POLICIES

A. Issue Statement and Policy Resolution

What sort of community facilities should be located in the Dulles North area? Where, when and by whom should these facilities be acquired?

Loudoun County will seek to provide residents of the Dulles North area with an appropriately located, coordinated and balanced complement of community facilities such as schools, parks and libraries as these are needed. The location of these facilities is very important since the use by local residents is greatly affected by visibility and ease of access. Public facilities that are well used deliver the greatest amount of public benefit per tax dollar spent.

The County anticipates that the sites for many public facilities will be reserved for school, park, library, or other public uses at the time of land development review and that these will be dedicated by developers to the County as needed. The County anticipates that no development would provide the location of all the facilities noted herein although the larger developments will be expected to contain a significant number of public facility sites. Facility construction and operational costs will largely be borne by County taxpayers, but Loudoun will seek assistance from other public agencies, such as the Northern Virginia Park Authority, quasi-public entities, such as Homeowner Association or the YMCA and the private sector in the development and operation of these facilities.

B. Policies

1. General Public Facility Policies

a. Phasing:

- i. The County will encourage incremental and compact growth of the Ashburn and later the Royville communities by developing public facilities and utilities initially in the cores of these communities and later, additional facilities further from the core.
- ii. The County will weigh the provisions of public facilities and utilities in rezoning, subdivision, special exception and site plan proposals in making its decision to approve or deny the proposal.

b. Site Acquisition/Location:

- i. Community facility sites will be identified and reserved for public use at the time of rezoning, special exception or subdivision and dedicated when needed to the County, the Northern Virginia Regional Park Authority or other appropriate public bodies.
- ii. Community facilities serving extensive geographical areas and/or large populations, such as community or neighborhood parks, health clinics or post offices should be located on major collector, community "spine" roads and/or within the commercial/office centers.
- iii. Community facilities serving limited geographical areas and/or local populations, such as elementary schools or tot lots, should be located within the neighborhoods

on minor collector or local access roads and pedestrian path systems.

- iv. The County will encourage the grouping of compatible community facilities, such as active recreational facilities and schools, when appropriate.

c. Ownership and Operational Responsibility:

- i. Community facilities serving a regional function and/or population, such as the W&OD Trail or a regional park will be generally owned and operated either by a regional agency such as the Northern Virginia Regional Park Authority or the County.
- ii. Public facilities serving a countywide or community-wide function, such as a community park, pool or recreational facility will generally be owned and operated by the County. When appropriate, the County will consider an ownership/operation joint venture with non-profit or for-profit entities. County policy in this case would be to ensure timely and cost effective provision of recreational services.
- iii. Public facilities like a lot or volleyball field servicing a small geographical area such as a subdivision will generally be owned and operated by a homeowners' association.

2. Educational Facility Policies

- a. School sites will be identified, then reserved at the time of rezoning, based on school children generation rates established by the Loudoun County School Board. Such sites will be deeded to the Loudoun County School Board when requested or at the time of subdivision or site plan approval.
- b. School sites will be located to the satisfaction of the Loudoun County School Board and the Virginia Department of Education at focal points in the residential community areas and should not be located in commercial or employment development areas.
- c. School sites will be rectangular and generally flat, with well drained soils possessing a structural bearing capacity acceptable to the County in the areas

designated for school buildings and accessory structures.

- d. Public utilities (*sewer, water, gas, electricity, phone, and cable TV*) will be installed underground by the developer to the property lines of a school site at locations specified by the Loudoun County School Board.

- e. Elementary Schools:

- i. Elementary school sites will be located at the focus of the attendance area and should be no further than eight-tenths of a mile from the residences of the majority of the students, along year-round, safe and effective pedestrian pathways.
- ii. Elementary school sites will have safe and direct access to a minor collector road.
- iii. Pedestrian pathways to elementary schools from the residential areas will be designed and constructed as a logical and convenient year-round system. Elementary school pathways will cross collector, residential community "spine" roads and arterial roads in a safe, grade-separated manner.
- iv. Elementary school sites will be large enough to accommodate school structures and programs and will be at least 15 acres in size.

- f. Middle Schools:

- i. Middle school sites will be located at the focus of the attendance area and should be no further than one and one-half miles from the residences of the majority of the students.
- ii. Middle school sites will have safe and direct access to a major collector or residential community "spine" road or to a minor collector road.
- iii. Middle school sites will be located at the focus of a year-round, safe and effective path system.

- iv. Middle school sites will be large enough to accommodate school structures and programs and will be at least 30 acres in size.
- g. High Schools:
 - i. High schools will be located at the focus of the attendance area and should be no further than one and one-half miles from the residences of the majority of the students.
 - ii. High school sites will have safe and direct access to a major collector or residential community "spine" road or to a minor collector road.
 - iii. High schools sites will be located at the focus of a year-round, safe and effective path system.
 - iv. High school sites will be large enough to accommodate school structures and programs and will be at least 45 acres in size.

3. Library Policies

Two library sites, one for a branch library in the Ashburn community and one for a neighborhood library in Royville, will be identified and reserved at the time of rezoning and dedicated to Loudoun County when requested by the County.

- a. Ashburn:
 - i. The Ashburn branch library site will be located near the existing village of Ashburn, in close proximity to a local commercial shopping center and will be located on a major collector road with access to this road or preferably to a minor road.
 - ii. The Ashburn branch library site will be at least two and one-half acres in size, will be rectangular and generally flat with well drained soils possessing a structural bearing capacity acceptable to the County in the areas designated for buildings.

b. Royville:

- i. The Royville neighborhood library will be located in close proximity to a local commercial shopping center and will be located on a major collector road with access to this road or preferably to a minor collector road.
- ii. The Royville neighborhood library site will be at least one acre in size, will be rectangular and generally flat, with well drained soils possessing structural bearing capacity acceptable to the County in the areas designated for buildings.

4. Parks and Recreational Policies

A balanced and coordinated recreational system will be established in the Dulles North area and will include one regional park, a regional linear park network, two community and nine neighborhood parks, environmental reserve, passive recreational areas and partial use of Loudoun County School Board recreational areas. In general, 10 acres of active recreational parkland per 1,000 people or 350 dwellings will be reserved at the time of rezoning for dedication to the County when requested by the County.²⁵ Part of this requirement for active recreational land will be satisfied by acreage on public school sites, but no less than seven acres of land per 1,000 people or 350 dwellings will be reserved for active recreation independent of the school sites.

a. Regional Park:

i. Location

The regional park will be located between one of the communities in Dulles North and the Town of Leesburg or within one of the communities. It will be in close proximity to Goose Creek, with excellent access to a major collector road and to regional trail networks linking these urban developments. A significant water feature should be associated with the regional park for boating and fishing activities.

²⁵

The standard of 10 acres of local parkland per 1,000 population is widely used in the U.S. and is incorporated in the 1984 Virginia Outdoors Plan prepared by the Commonwealth of Virginia, Department of Conservation and Economic Development (*Richmond, 1984*), page 30.

ii. Size, Topography and Vegetation

The regional park will be 150 - 500 acres in size, will consist of a variety of topographical and ecological environments from level to rolling to sloping terrain and from open fields for sports to woodlands for camping and nature walks.

iii. Ownership and Operation

The regional park will be owned and operated by a regional park authority, the County and/or an organization established to provide recreational services which is deemed acceptable by the Loudoun County Board of Supervisors.

b. Regional Linear Park Network:

i. Network Extension

The regional linear park network will be designed to extend outwards from the existing Washington and Old Dominion Railroad Regional Park to link the new communities in Dulles North with the future Potomac Heritage Scenic Trail, the proposed regional park near Goose Creek and environmental reserve areas on Broad Run. The network will link areas of diverse environmental and cultural features.

ii. Network Size and Travel Modes

The regional linear parks will be a minimum of 60 feet in width and will be designed to provide safe and effective links within Dulles North and between the new communities, eastern Loudoun and Leesburg, using a variety of travel modes, including equestrian, pedestrian and bicycling.

iii. Ownership

The regional linear parks will be owned and operated by a Federal or State agency and/or the Northern Virginia Regional Park Authority.

c. Community and Neighborhood Parks and Recreation Centers:

i. Location

The community and neighborhood parks and recreation centers will be located throughout the new residential neighborhoods of the Ashburn and Royville communities in proximity to the Loudoun County School Board properties. The community and neighborhood parks will be located on a major collector or community "spine" road with access to this road or preferably to a minor collector road and will have access to the pedestrian path network focused on the schools (See *Figure 24, page 63*).

ii. Size, Topography and Vegetation

The community and neighborhood park and recreation center sites will be a minimum of 30 and 15 acres in size respectively, will be predominantly flat with well drained soils possessing a structural bearing capacity acceptable to the County in the areas designated for recreational structures in order to provide year-round active recreational opportunities and playing fields.

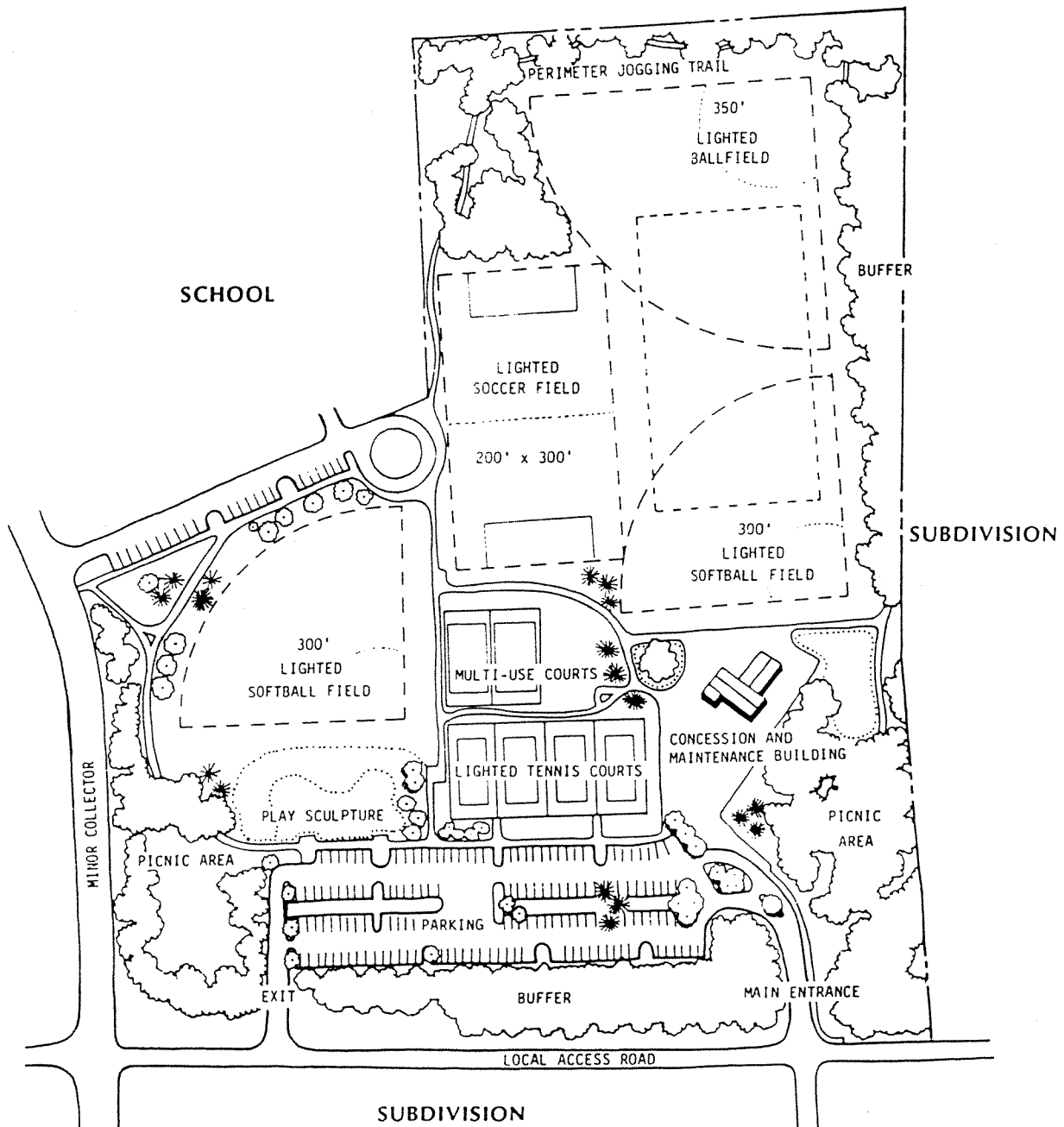
Although natural woodlands, streams and floodplain areas for passive recreational purposes may form a component of these parks, such features will be limited to 30% of the acreage.

iii. Ownership and Operation

The neighborhood parks will be owned and operated by a regional park authority if closely associated with the linear park network, otherwise by the County Parks and Recreation Department and/or an organization established to provide recreational services which is deemed acceptable by the Loudoun County Board of Supervisors.

DULLES NORTH

LOUDOUN COUNTY, VIRGINIA



NEIGHBORHOOD PARK EXAMPLE

FIGURE 24

17 ACRE EXAMPLE SITE

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- d. Cooperative Agreements between the Department of Parks and Recreation and the School Board:

Existing cooperation between the County and the School Board regarding use of school playgrounds will be continued in the future and codified in agreements between the Board of Supervisors and the School Board as necessary.²⁶

- e. Residential Block Parks:

- i. Location

Residential block parks, which provide a variety of small scale, local recreational facilities such as tot lots, volleyball, basketball or tennis courts and/or swimming pools, will be located throughout the residential blocks of the communities.

- ii. Size and Character

The character and extent of the individual block park facilities will be proposed by the individual applicants at the time of rezoning, special exception, subdivision or site plan. County review of the proposal will take into consideration the compatibility of this proposal with the character of the overall development and the proximity of other recreational facilities, such as the nearest neighborhood or community park.

- iii. Ownership and Operation

Ownership and operation of residential block parks will be the responsibility of the respective homeowners' associations.

- f. Passive Recreational Parks:

- i. Location

Passive recreational parks will be designated on the floodplain areas and on other lands

²⁶

Note that the County anticipates that three acres of active recreation land per 1,000 population will be located on school sites as noted in Policy #4, page 60.

possessing significant woodland or environmental features such as rock outcrops or wooded slopes which are in close proximity to community development areas. These passive recreational areas are intended for picnics, walking and loosely structured group activities on the part of adjacent residents. The passive recreational areas may form part of a regional trail network but are generally considered to be local natural areas for the enjoyment of individual neighborhoods and blocks.

ii. Ownership and Maintenance

The passive recreational parks will require a minimum of development and maintenance designed to avoid unnecessary brush fires, mosquitoes or other nuisances to the surrounding residents. Unless the area forms part of a regional path network, ownership and maintenance of the passive recreational areas will be the responsibility of the neighboring homeowners' association.

g. Environmental Reserve Areas:

i. Location

The environmental reserve areas will be selected at the time of rezoning, special exception, subdivision or site plan review with the goal of conserving a representative sample of the area's diverse vegetation and wildlife habitat. The reserve areas should be surrounded if possible, by uses compatible with the reserve such as commercial woodland or meadow bottomland, or be adjacent to the passive sectors of the regional park.

ii. Size and Access

Environmental reserve areas of normally two - five acres but which might be up to 50 acres will be located on one or more tracts of land, usually in extensive floodplain, for the purpose of preserving a representative sample of the natural environment of the Dulles North area. The nature and compatibility of the adjacent

uses will powerfully influence the amount of acreage necessary to preserve this environmental sample and thus the County will review proposed management practices of the surrounding land in its determinations. Access to the areas would be restricted to school groups, local scientific organizations and others engaged in the observation of undisturbed ecosystems.

- iii. Reserve ownership can range from an open space easement to fee simple ownership by an organization dedicated to the preservation and study of natural habitats such as the Northern Virginia Regional Park Authority. Minimal management of the reserve is anticipated. Maintenance of the reserve areas might range from a legal commitment on the part of a private landowner to certain management practices (*e.g., no clearcut forestry*) to a management practice of minimal disturbance of the natural state of the reserve.

5. Church and Service Organization Facility Policies:

- a. Church and service organization sites will be reserved for purchase by those organizations at the time of rezoning, special exception, subdivision and/or site plan review, to accommodate private facilities for community worship and/or service functions.
- b. Church and service organization sites will be identified at a rate of three acres of land for every 1,000 people or 350 dwellings. These sites may range from two to five acres and should be rectangular and generally flat, with well drained soils possessing an acceptable structural bearing capacity.
- c. Church and service organization facilities should be designed, landscaped and buffered so that they are compatible with neighboring development. The facilities will possess adequate on-site parking and landscaping/screening in order to reduce community friction to a minimum.
- d. Church and service organization sites may be located on major collector or community "*spine*" roads and may also be located on minor collector roads. Access

to these facilities may be obtained from the major collector road but access from a minor collector road is preferable.

- e. Church and service organization sites should generally be located near shopping center, school and/or park sites in order to facilitate the shared use of parking lots.

6. Local Government Center and Post Office Site Policies

a. Government Center Site:

- i. The government center site in the Ashburn Community with local offices for the County Treasurer, Commissioner of the Revenue and other functions will be identified and reserved at the time of rezoning and dedicated to Loudoun County when required by the County.
- ii. The government center site will be located on a major collector or community "*spine*" road in close proximity to a local commercial center in the Ashburn Community.
- iii. The government center site should preferably be located in close proximity to the existing Village of Ashburn and should be designed to be compatible with both the new and the old development in architectural design and type of use.
- iv. The government center site will be five acres in size, be rectangular and generally flat, with well drained soils possessing a structural bearing capacity acceptable to the County.

b. Post Office Site Reservation:

- i. Two post office sites will be reserved for purchase by the postal facility sponsor(s) in the Dulles North area, one in the Ashburn community and one in the Royville community.
- ii. The post office sites will be located on a collector or community "*spine*" road in close proximity to a neighborhood commercial center.

- iii. The Ashburn post office site should be two acres in size while the Royville site should be one acre in size. The sites should be rectangular and generally flat, with well drained soils possessing structural bearing capacity acceptable to the County.

7. Combined Fire, Emergency Rescue and Sheriff Substation Site Policies

Three fire and emergency rescue station sites and one Sheriff's substation will be designated in the Dulles North Area. One of the fire/emergency sites will be within the Ashburn community, another within the Royville community and one combined fire, emergency rescue and the Sheriff's substation will be located within the employment area north of Dulles Airport and between the airport and the Ashburn community. One satellite emergency rescue station will also be located in the Ashburn community in a different sector from the combined fire and emergency rescue facility.

- a. The fire and emergency rescue station sites should be located adjacent to a major collector or community spine road and, preferably, close to the intersection of the road with a transverse collector road. The Ashburn and Royville community stations should have a high visibility location within the two communities, such as close to the shopping centers, in order to stimulate community knowledge and interest in volunteer fire and emergency rescue services.
- b. The Sheriff's Department substation should be located at the same site as the fire and emergency rescue station designated for the employment area in order to provide some isolation from noises associated with 24 hour law enforcement operations, to facilitate police and fire cooperation and to provide a focal point for major police/fire operations in this area.
- c. The Ashburn and Royville community fire and emergency rescue station sites will be two acres in size. The combined fire and emergency rescue and Sheriff's substation will be five acres in size. The Ashburn satellite emergency rescue facility will be one-half to one acre in size. The sites should be level, rectangular, with well drained soils and possessing a structural bearing capacity acceptable to the County.

- d. The County encourages new development in the planning area to contribute significantly not only to the creation of these volunteer fire and emergency rescue organization facilities, but also to the annual costs incurred by the purchase of equipment and operational expenses.

V. COMMERCIAL FACILITIES POLICIES

A. Issue Statement and Policy Resolution

Where will the residents of Dulles North shop? Should there be a large number of small shopping centers or fewer and larger commercial centers?

Smaller shopping centers generate proportionally more traffic than larger commercial centers while their diminutive size renders them less able to invest in necessary entrance and exit improvements. County experience furthermore indicates that community residents tend to bypass smaller centers in favor of larger commercial centers. Accordingly, two local shopping centers will be designated for the Ashburn community and one local shopping center will be designated for the Royville community. In addition to these local commercial facilities a community shopping center will be designated in the Dulles North area near the proposed Route 643/Dulles Toll Road Extended and in the employment area. A regional shopping center site has been designated in the southwest quadrant of the Routes 28 and 625 intersection. An additional regional shopping center site has been designated in the southeastern quadrant of the Routes 28 and 7 intersection. Finally, a regional location is designated at the northwest quadrant of Routes 625/28. No additional regional shopping center sites will be identified in this plan. More than 20 acres of land located on the eastern boundary of the existing village of Ashburn and forming the residual land base of the old Washington and Old Dominion Railroad depot and associated mills are zoned for commercial uses but are largely not developed in such uses. The County encourages the appropriate development of these properties in employment and commercial uses.

B. Policies

1. Commercial establishments, such as grocery stores, opticians and beauticians will be developed in compact centers as elements of community and local shopping centers. Commercial services ancillary to industrial and employment uses, such as office supply, printing or sandwich shops, will be permitted to locate within industrial areas.

2. Two local shopping centers will be designated in the Ashburn community in opposite quadrants of the community and one local shopping center will be designated in the Royville community. A community shopping center will be designated near the proposed Route 643/Dulles Toll Road Extended in the employment area.
3. In shopping centers the following commercial activities are encouraged to develop.
 - a. Regional Shopping Centers
 - i. Retail: 600,000 - 1,200,000 gross square feet of retail space on 70 - 80 acres. Tenants should include a wide range of retail facilities to be agreed upon at the time of rezoning.
 - ii. Office: Adjacent land may be zoned for office uses.
 - b. Community Shopping Center
 - i. Retail: 100,000 - 300,000 square feet of gross retail floor space on sites of 20 - 40 acres of shopping center site. The community shopping center should contain a bank, restaurants/fast food establishments, movie theaters, a supermarket, hardware and furniture stores, specialty and clothing stores and a junior department store in a compatible design.
 - ii. Office: 100,000 - 300,000 square feet of gross office floor space included within the community shopping center and/or freestanding office buildings adjacent to the center.
4. Commercial centers will be designed, landscaped and buffered so that they are compatible with neighboring development. Accordingly, the centers will possess adequate on-site parking, storage and loading areas as well as landscape screening of these functions from surrounding neighborhoods. Massing, signs and exterior cladding on the front, sides and rear facades of the centers which create negative visual impacts should be reduced to a minimum. Pedestrian and vehicular circulation systems in and around the commercial centers will form a safe and convenient network. Outdoor lighting will be designed for both effective nighttime use of the facility and to reduce off-site glare to a minimum.

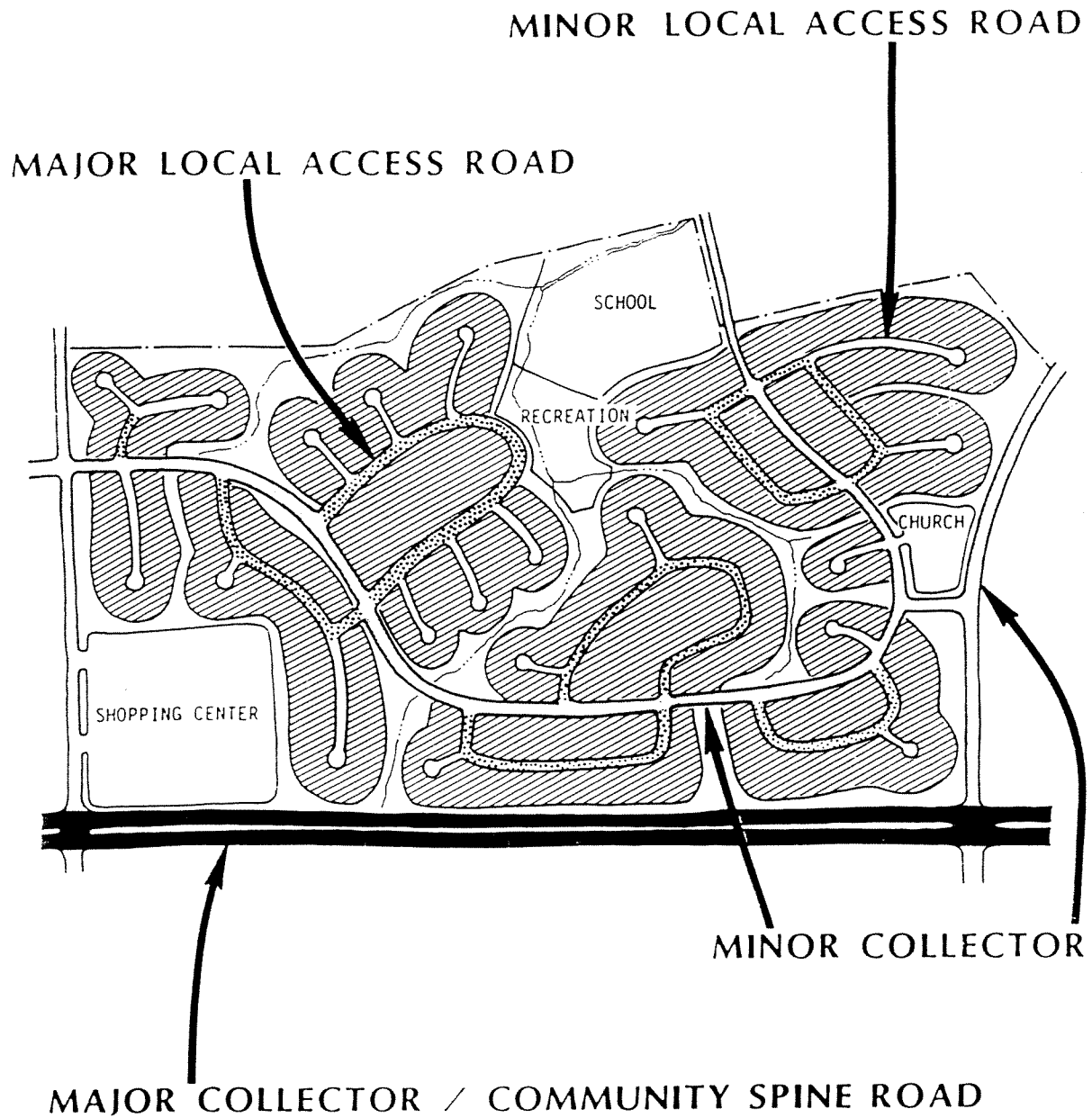
5. Commercial centers will be located adjacent to transportation facilities that are adequate to serve them. Accordingly, the community commercial center should be located near the intersection of an arterial and major collector road in the center of the Dulles North planning area while the local commercial centers should be located near the intersection of a community "spine" road and either a major or minor collector road.
6. Access to commercial centers will be controlled to provide safe and efficient movement of traffic into the centers, without impeding traffic movements along the adjacent roadways. Accordingly, entrances to the community commercial center should be at least 250 feet from the centerline of the major collector/arterial road intersection while the entrances to the local commercial centers should be at least 150 feet from the centerline of the major collector road/community "spine" road intersection. Generally, entrance to and exit from the commercial centers will be made from the minor road serving the center to cause the least disruption to traffic on the major roadway (See Figure 25, page 72).

Furthermore, to reduce unnecessary road crossover movements, community and local commercial centers will be confined to a single quadrant of an intersection. In order to reduce left hand turns, the commercial centers should generally be located on the commuters' right as they are returning home in the evening.

7. Random siting of drive-in establishments and/or strip commercial development with multiple individual access points along roadways will not be approved in the Dulles North area.
8. Ancillary commercial services to industrial and/or employment areas such as stationary supply stores, printing shops, food establishments or repair shops, will be located within these developments and will be reached by means of the entrances and roads established for the employment park developments.

DULLES NORTH

LOUDOUN COUNTY, VIRGINIA



ROAD NETWORK CONCEPT

FIGURE 25

OCTOBER 21, 1985

9. The former railroad depot and related properties which are zoned for commercial use and which are located on the eastern edge of the existing village of Ashburn should be developed in a mixture of commercial and office employment uses in a way which is sensitive to the historic village. Road and pedestrian linkages between these properties should extend eastwards to the proposed local shopping center, the government center and the library. This road and path system should be designed to relieve the anticipated vehicular and parking congestion in the existing village of Ashburn which would be caused by commercial development on the already zoned commercial land in the village.

VI. TRANSPORTATION POLICIES

A. Statement of Issue and Resolution

How should the transportation system in the Dulles North Area be designed and implemented to ensure a condition of stable flow and efficient travel time for people and product movement?

Existing roads in the Dulles North area could not support traffic generated by any significant level of development since these roads were designed to support a low intensity, 19th century, dairy oriented, farming community. Therefore, a new road network will be needed and the County will oversee the design and implementation of a transportation network which promotes safe and convenient vehicular traffic; protection of neighborhood residents, particularly children; reduction of long-term road maintenance costs; efficient investment of public and private road construction resources; protection of neighborhood character by limiting neighborhood traffic volume, speeds, noise and fumes; efficient use of land and reduction to a minimum of impervious surfaces with consequent enhancement of water quality. The central design concept underlying County policy is one of separation of different types of travel from one another and from incompatible land uses.

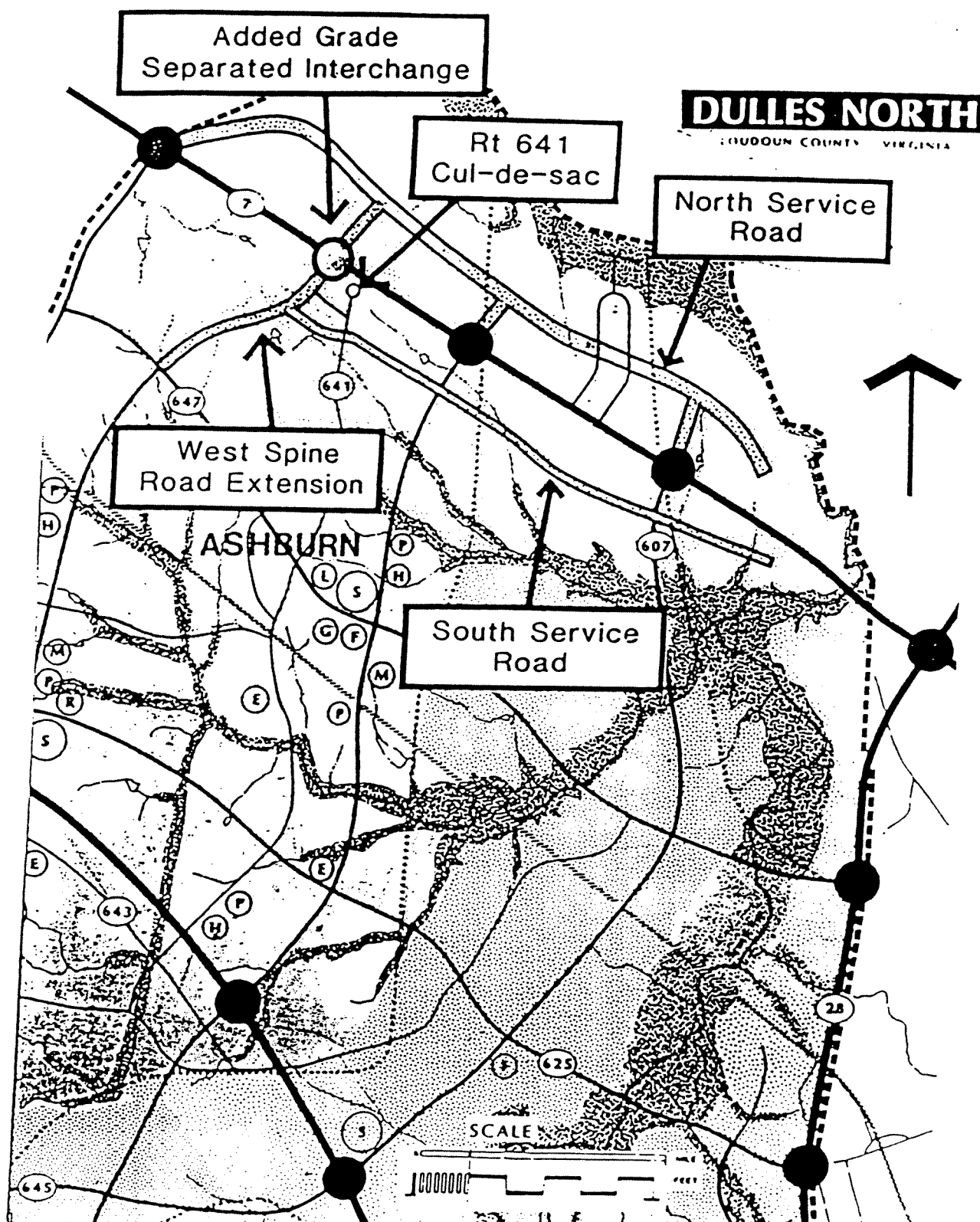
B. Road Policies

1. The road network in the Dulles North area will consist of a coordinated and balanced hierarchy of arterial roads (*including freeways*), major collector/community "*spine*" roads, minor collector and major and minor local access roads designed to achieve the safe, efficient, and functional movement of people and products (*as illustrated in Figure 27, Generalized Plan Map, end foldout*).
2. All roads in the Dulles North area will be built to Virginia Department of Transportation standards for acceptance into the State Highway system.

Proposed Amendments to the Dulles North Area Management Plan

October 14, 1986

ADOPTED OCTOBER 20, 1986



3. Arterial Roads:

a. Designation

The arterial road network will consist of Route 7, Route 28 and the Dulles Toll Road Extension. The Route 647 Relief Collector Road for Route 7 will assist the east/west movement of commuters as well (*See Plan Map, end foldout*).

b. Functional Description

The arterial roads will be designed to accommodate 41,000 - 48,000 vehicle trips per day. The three arterial roads collectively will accommodate 137,000 vehicle trips per day in a condition of stable travel flow at speeds averaging 50 miles per hour at time of peak flow, although with some restriction in lane changes.

c. Design

Route 7, Route 28 and the Dulles Toll Road Extension will be designed at a minimum as six lane roads with limited access. Intersections along the roads will be grade separated and controlled. Design of Route 7 will follow the provisions contained in the adopted Route 7 Corridor Study.

The major collector roads directly serving Route 7 will generally have limited access for that portion of the road within 1,000 feet of Route 7, consistent with requirements for traffic operation, safety and all applicable VDOT standards.

Within the DNAMP, grade separated interchanges for the Dulles Toll Road Extension will be constructed initially at or in the vicinity of Routes 28, 606, 607, 772 (*East Spine Road*), and 659. A future interchange is planned at the West Spine Road. Necessary right-of-way for the ultimate design of initial and future interchanges, as approved by the Commonwealth Transportation Board and VDOT, shall be acquired prior to commencement of the Toll Road construction. Interchanges will be designed to provide maximum capacity consistent with reasonable long-range growth projections to accommodate cost effective construction of incremental improvements in those instances where future expansion of interchanges is contemplated. The designation of interchanges as initial reflects a satisfactory road network or a commitment on the part of the Toll Road and affected property owners to provide necessary right-of-way for and to construct the appropriate connector roads to

serve with the interchanges. Failure to coordinate constructions of necessary connector roads may result in the delayed opening of interchanges. The County plans for a future mass transit facility to be constructed in the median of the Toll Road. The Toll Road builder shall reserve sufficient land in the median for full access to the median for future transit facilities. The County will coordinate with affected landowners to accept dedications of land for future transit stations and parking facilities.

The construction of the limited access Toll Road will have an effect on the nearby traffic patterns. Traffic generation on local feeder roads is anticipated to increase; therefore, the County will coordinate with affected landowners in the DNAMP planning area to plan, designate and establish an effective parallel collector road system on the north and south sides of the Toll Road to be completed concurrently with the development of adjacent properties.

Construction of the Toll Road will traverse existing state roads. The existing road network should not be disrupted, degraded or severed by the Toll Road unless such degradation is offset by other improvements made by the Toll Road builder.

d. Route 7 Landscaping and Setback Plan

A landscaping plan with a 300 foot building restriction setback from the right-of-way, will be developed along Route 7 in the Dulles North area and will be implemented concurrently with development on both sides of the road.

Buffering will be required along the Toll Road to protect adjacent land uses from noise, dust, fumes, and odors caused by traffic. Such buffers could include: concrete sound barriers, earthen berms, and/or dense vegetation combined with substantial setbacks within the right-of-way. A table should be developed which includes each type of land use found abutting the road and a range of required mitigation measures for each use. During construction, the Toll Road builder shall provide appropriate buffers from existing residential and non-residential uses, and from similar land uses approved but not yet constructed prior to the Toll Road's construction, while buffer for future land uses will be provided by the affected landowner/developer.

4. Major Collector/Community "*Spine*" Roads:

a. Designation

The major collector/community "*spine*" roads will consist of Route 625/640, Route 607/645, Route 606, the proposed Western Ashburn/Royville Community "*spine*" road, the proposed Eastern Ashburn Community "*spine*" road and the Route 647 Relief Collector Road for Route 7.

b. Functional Description

The major collector roads will be designed primarily to assist vehicular movement through the Dulles North area and not for access to individual lots. The major collector roads will be designed to accommodate 20,000 - 30,000 vehicle trips per day at speeds averaging 40 miles per hour in a condition of stable flow.

c. Design

Major collector roads directly serving Route 7 will generally have limited access for that portion of the road within 1,000 feet of Route 7, consistent with requirements for traffic operation and safety and all applicable VDOT standards. While access to property will not be the intent of these roads, access to a major facility such as a shopping center or a regional park would be granted if safe travel flow were ensured. Parking will not be allowed on major collector roads.

5. Minor Collector Roads:

a. Functional Description

Minor collector roads conduct and distribute traffic from the major collector roads to the local access roads and to major residential developments, public facilities and commercial centers. The minor collector roads will be designed to accommodate 3,000 - 7,000 vehicle trips per day at design speeds averaging 35 miles per hour.

b. Design

Minor collector roads in residential areas will be designed to permit very few if any direct residential lot access points. In employment areas the minor collector road could

be designed to provide direct access to larger employment facilities if safe and stable traffic flow were ensured.

In residential areas, the minor collector roads could provide access to schools, parks, apartment complexes, churches and service organization facilities. The minor collector roads will be designed to discourage through traffic from other developments and will not be designed to provide on-street parking. *(See Figure 26, page 78).*

6. Major Local Access Roads:

a. Functional Description

Major local access roads will provide access to abutting properties and may also conduct traffic from local access roads that intersect them. The major local access roads will accommodate a traffic volume no greater than 3,000 vehicle trips per day at speeds of 25 miles per hour. *(Each half of a looped major local access road may be treated as a single road conveying a maximum of 1,500 vehicle trips per day.)*

b. Design

Major local access roads will be designed to twice intersect a minor collector road if the total traffic volume is expected to exceed 1,500 vehicle trips per day. Major local access roads will be designed to exclude all external through traffic. Lateral parking could be allowed on major local access roads if two safe moving lanes are maintained *(See Figure 26, page 78).*

7. Local Access Roads:

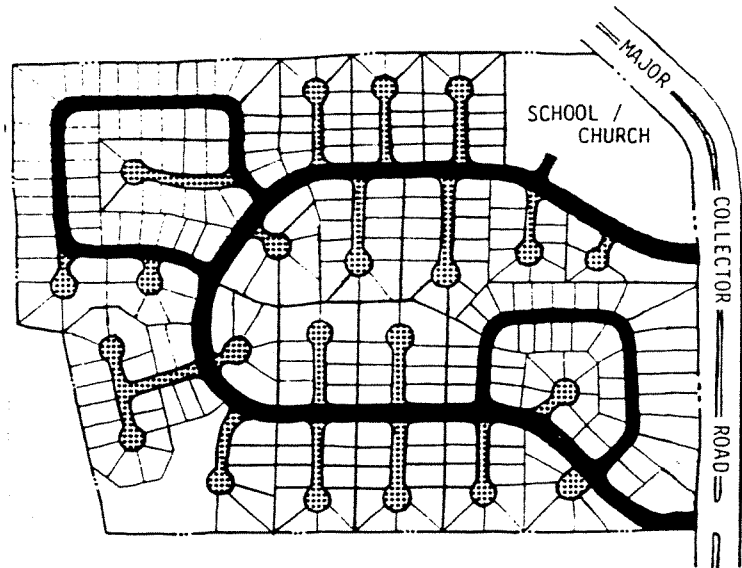
a. Functional Description

Local access roads will provide access to abutting properties and will be designed to carry no more traffic than that which is generated on the road itself. In residential areas a local access road will accommodate a traffic volume no greater than 500 vehicle trips per day at speeds of 0 - 25 miles per hour. *(Each half of a looped local access road may be treated as a single road conveying a maximum of 250 vehicle trips per day.)*

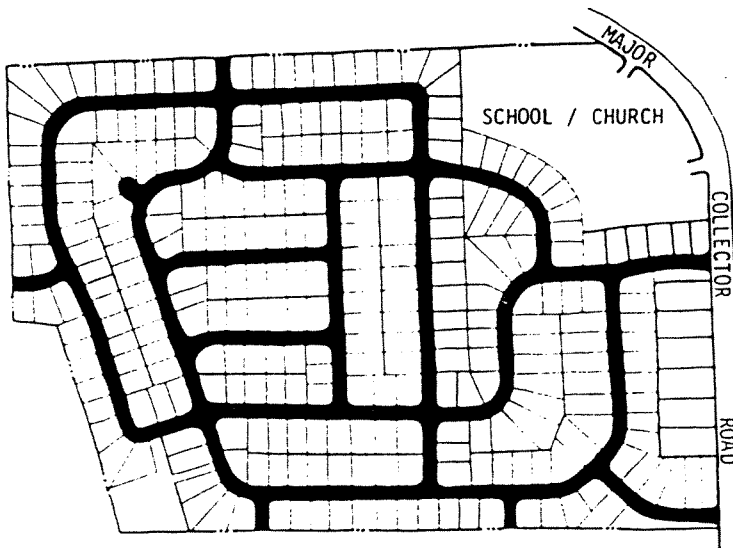
DULLES NORTH

LOUDOUN COUNTY, VIRGINIA

PREFERRED DESIGN



An example of a residential block with a clear hierarchy of roads. Through traffic travels on a divided collector road. Lots do not access onto this road but rather onto secondary roads. The residential block is free of through traffic while most lots access either onto a major or minor local access road.



POOR DESIGN

An example of a residential block without a clearly defined road system. Direct access from lots and school/church onto the inadequate collector road is hazardous and encourages traffic to seek short cuts through the residential block. Later rezonings on either side of the block may generate additional traffic which the local roads were not designed to carry. This will require later front yard condemnation and costly road widening.

BLOCK ROAD LAYOUT CONCEPT

FIGURE 26

OCTOBER 21, 1985

b. Design

Local access roads will be designed to twice intersect the same minor collector or major local access road if the total traffic volume is expected to exceed 250 vehicle trips per day. Local access roads will be designed to exclude all external through traffic. Lateral parking could be allowed on a local access road if two safe moving lanes are maintained (See Figure 26, page 78).

8. Major Upgrading of Existing Roads:

Major collector/community "spine" roads and minor collector roads serving new development should generally not use existing road rights-of-way particularly in those areas, such as Ashburn and Ryan, where existing roads provide local access to individual lots, businesses and dwellings.

9. Other Existing Roads:

Existing secondary roads in the Dulles North area which have not been included in earlier road designations will be evaluated and classified as proposals are made to the County. The existing secondary roads will generally be assumed to qualify as minor collectors, with limited property access characteristics and no lateral parking, but may be designated otherwise if the County deems this appropriate.

10. The County expects that proposals in the Dulles North area will incorporate a hierarchical road network from local access to major collector roads commensurate with the traffic flows associated with the proposal. Proposals located in the path of the proposed Route 643/Toll Road Extended arterial road may receive additional residential density and local commercial uses in return for undertaking the dedication and construction of this arterial road. Without this arterial road, development in the center of the Dulles North area would necessarily be restricted to that which could be accommodated by the major collector system.
11. The County anticipates that developers in the area will assist in the creation of the road network which, by providing vehicular access to all parts of the Dulles North area, will benefit all local landowners.
12. The number of roads crossing the Washington and Old Dominion Railroad Regional Park should be limited whenever possible to major collector/community "spine" roads. Provision should be made for the intersection of this facility with the roads.

C. Shared Ride Policies

1. The County will encourage the use of the arterial and collector road network by carpools, vanpools and commuter buses by cooperating with metropolitan information exchange efforts.
2. The County will encourage the daytime use of portions of shopping center parking lots located near arterial roads by those seeking to share commuter rides.
3. The County will cooperate with the Virginia Department of Transportation in the creation of park-and-ride lots within the Dulles North area.
4. The County will consider proposals to locate a commuter bus terminal in an employment zone if the proposed use is compatible with surrounding development and if appropriate public facilities and utilities are available to support the facility.
5. The County will consider proposals to locate trucking and bus repair facilities in the employment zones of the Dulles North area if the proposed use is compatible with surrounding development and if appropriate public facilities and utilities are available to support the facility.

D. Airport Policies

1. The County will encourage the use and expansion of the Washington Dulles International Airport to achieve its full potential as a five runway facility so long as this growth does not negatively affect the local community. The County reaffirms its commitment to supporting the goals and plans of the Airport Authority, and to protecting the public interest by ensuring that land uses adjacent to the airport are compatible with airport functions and the long term plans of the Airports Authority, while ensuring each landowner a reasonable use of his property.
2. The County will cooperate with the Washington Dulles International Airport authorities to research and refine effective operational procedures which will permit compatible growth of the airport and the Dulles North area.
3. The County will negotiate with the Washington Dulles International Airport authorities such agreements on airport operations as will ensure harmonious community development in the Dulles area.

4. The County will map present and future corridors of aircraft arrival and departure in the Dulles North area and will only permit land uses in these corridors which are compatible with the height, noise and vibration characteristics associated with low flying aircraft.
5. Appropriate land uses for the "*airport expansion area*", should be of low intensity, low capital investment, low height and compatible with existing and planned airport activities as well as existing and planned adjacent land uses along Route 606. No office uses, other than those which are accessory or incidental to permitted industrial uses will be allowed in this area, nor will bulk storage of gasoline, petroleum products or natural gas will be permitted or private airports or heliports. Sewer service for the expansion area should be provided by a line along Horsepen Run rather than by a pump-over to Broad Run or by package plants.
6. The County urges the Metropolitan Washington Airports Authority to act expeditiously in acquiring the land in the designated expansion area. The airport expansion area is suitable for interim general employment or agricultural uses.

VII. SOLID WASTE DISPOSAL POLICIES

A. Issue Statement and Policy Resolution

The projected growth for the Dulles North area and other portions of the County will generate large amounts of solid waste and construction debris. How will the County address the future solid waste and debris disposal needs of the Dulles North area?

With the existing County landfill on Route 621 south of Leesburg reaching its full capacity in the next ten years and the closing of the Hidden Lane debris landfill in October 1984, the County has begun to examine future alternatives for solid waste disposal. These include potential sites for a new landfill and new methods and techniques for waste disposal to extend the life of a landfill site. A task force has been established to review these questions and the County may adopt additional policies.

B. Policies

1. The County will not permit the location of sanitary or debris landfills in Class IV soils due to the potential problems with subsurface and surface drainage, grading and excavation in these soils.
2. The County will prohibit the location of sanitary or debris landfills or solid waste transfer stations in areas planned for residential and

community oriented land uses, while it will consider special exception applications for these operations in areas designated for general employment uses.

3. The County will actively pursue the acquisition of new sanitary and debris landfill capabilities to serve the Dulles North area and the County. Site locations will be based on technical, economic, community impact, demographic and transportation criteria approved by the County.
4. In a forthcoming study of the matter, the County will investigate the economic and technical feasibility of new technologies to reduce the total volume of solid waste and extend the life of sanitary and debris landfill sites.
5. Given the toxicity of many household materials and residual County obligations to protect the health, safety and welfare of citizens long after the closing of such facilities, the County will not allow the operation of a private sanitary landfill in the Dulles North area. Properly designed, managed and monitored private building debris landfills may be allowed by special exception in designated employment areas of the Dulles North planning area.

VIII. SEWER SERVICE POLICIES

A. Issue Statement and Policy Resolution

How should the County manage wastewater treatment in the Dulles North area to minimize public expense and avoid future problems?

The wastewater treatment needs for the Broad Run watershed in the Dulles North area can be provided for by means of the Potomac Interceptor Trunk Line Sewer owned and operated by the District of Columbia. A 1963 agreement between the Loudoun County Sanitation Authority and the D.C. government allows Loudoun County to pump 17.93 million gallons of sewage per day into the line which should be sufficient to service the proposed future development in eastern Loudoun and the Dulles North area. In the event that Loudoun might require sewer treatment capacity which the District of Columbia could not provide, the County will maintain a fallback sewer service position.

B. Policies

1. The County will continue to rely on the Potomac Interceptor Sewer as the provider of 17.93 million gallons per day of sewage flow for future development in the Broad Run watershed, in the Eastern Loudoun and Dulles North areas.

2. In addition to policy VIII.B.1., the County will examine the options of developing a new wastewater treatment plant, to be located within the general employment area along the Broad Run to accommodate the remaining sewage needs of the Dulles North and the upper Broad Run areas.
3. To establish the options of creating a sewer plant on the Broad Run, Loudoun County shall direct the Loudoun County Sanitation Authority to pursue the water quality studies and other necessary tests as well as review appropriate sites which would meet the permit requirements of the State Water Control Board.
4. In the event that the County can neither obtain sufficient sewer capacity from Blue Plains via the Potomac Interceptor Sewer Line, nor acquire sufficient sewer capacity on the Broad Run, the County will reexamine this plan and, if necessary, draw up a revised land use plan.
5. The County will not extend sewer lines to serve private development in the Dulles North area, and will require that line extensions be the responsibility of the private sector.
6. The County will seek ways to extend sewer lines into the existing village of Ashburn once development in the surrounding areas has brought trunk sewers to the edges of the village.
7. The County will require the pretreatment of toxic wastes from industrial land uses before these wastes are allowed to enter the main sanitary system.

IX. WATER SUPPLY POLICIES

A. Issue Statement and Policy Resolution

How should the County plan for the future water supply needs in the Dulles North area?

The water supply needs for the Dulles North area can be provided by means of the Goose Creek impoundment and water supply facility owned and operated by Fairfax City. The agreement obligates Fairfax City to provide for the County's reasonable water needs. Should future water demands in Loudoun expand beyond the capacity of the existing plant, Loudoun will negotiate with existing water suppliers in the County for an increased share and/or role in water supply.

B. Policies

1. The County will continue to rely on Fairfax City's Goose Creek impoundment as the provider of water for future developments in the Dulles North area.
2. The County will review and renegotiate the agreement with Fairfax City in the future if such an action is determined to be in its best interest.
3. The County will authorize the Sanitation Authority to examine other water supply options including the existing Potomac River water plants operated by the Town of Leesburg and the Fairfax County Water Authority and the construction of its own water facility on the Potomac.

X. WATER RESOURCES AND WATERSHED MANAGEMENT POLICIES

A. Issue Statement and Policy Resolution

The Dulles North area is part of the Broad Run watershed which is currently experiencing some soil erosion due to natural soil conditions and certain farming practices. Extensive residential and employment development planned for this area would result in a major increase of impervious surfaces, such as roads, parking lots and roofs, and thereby accelerate the rate of water runoff and the volume of surface water. If the problem is not addressed, a pattern of erosion, flash flooding and lowered water quality would result. How should the County manage existing and future development in the watershed to abate environmental degradation?

The County will continue and will supplement existing policies which seek to maintain the existing watershed and watercourse system in a stable, long-term pattern. Existing floodplain ordinances designed to reduce disturbance to the streambed profile to a minimum will be maintained. Any changes to the floodplain will not be allowed to increase either the erosive velocity or height of floodwaters above or below the altered property in order to protect the property rights of adjacent landowners. The County anticipates that the development of holding basins, runoff restriction sluices and the planting of vegetation belts will lengthen the flow cycle of surface water runoff from new developments with their extensive impervious surfaces. The County will expect and strongly encourage the retention of all watercourses in as natural a state as possible because this is in harmony with its policy of maintaining the hydrologic patterns in a historically stable equilibrium.

B. Policies

1. The County will seek to preserve the 100 year floodplains in their natural state and will ensure that land development and changes do not increase flooding beyond what would occur in a 100 year flood.
2. The County will encourage multiple use of the 100 year floodway and floodway fringe for timber and firewood production, wildlife habitat, passive recreation and trails to the extent that these activities maintain hydrologic and ecological balance.
3. The County will encourage maintenance of stream channels and other elements of the natural drainage system to the maximum extent possible.
4. If the natural drainage system must be modified, the County will encourage the restoration of the streambed and adjacent slopes to a comparable hydrologic and ecological condition.
5. The County will discourage all but the minimum number of stream and floodplain crossings and will encourage the use of streams and floodplains as natural divisions between neighborhoods and differing land uses.
6. The County will seek to ensure that the overall management of the Broad Run watershed will ensure that the watershed will not suffer water quality reduction. The County will further seek to enhance the existing environmental quality by means of on-site or off-site stormwater catchment facilities and vegetation belts.
7. The County expects that developers of the Dulles North area will incorporate stormwater catchment facilities and vegetation belts as an integral part of development proposals. The County prefers that these measures be associated with and integrated into the proposals for residential block parks and passive recreational parks.

XI. MANAGEMENT POLICIES FOR PROBLEM PRODUCING SOILS

A. Issue Statement and Policy Resolution

The Dulles North area contains many acres of soil which could produce problems if not addressed during residential or employment development. These soils include those with poor drainage, those with rock formations close to the surface and "jackland" which is a highly plastic soil with poor surface drainage, subject to expansion and contraction and liable to crack concrete surfaces such as basement walls, roads and parking lots. What policies should the County adopt with regard to problem soils?

Development in problem soils, particularly "*jackland*", could lead to cracked roads and foundations, wet basements and other situations that are very difficult and expensive to correct retroactively. The County will accordingly adopt a policy of requiring engineering practices and design features that positively address the question of problem soils in initial development.

B. Policies

1. Soil conditions should be a determining factor when developers assemble a rezoning, subdivision, special exception or site plan proposal for County review. Furthermore, the County will weigh the conformance of a proposal with the underlying soil conditions in decisions to approve or deny the proposal.
2. The County prefers the utilization of building types which will reduce potential soil related problems for future users to a minimum. Thus residences in areas with high water table soils should have on-grade storage rather than excavated basements.
3. The County and its agencies will consider soil conditions in evaluation and acceptance of any proffered public facility sites. The County will prefer sites with few problem soil areas but will accept otherwise suitably located sites which have been improved by exchanging the original poor soils for better soils.

XII. MINERAL RESOURCE EXTRACTION POLICIES

A. Issue Statement and Policy Resolution

Located within the Dulles North area are some formations of diabase rock, a material useful for roads and concrete foundations. Surrounding the planning area are five active diabase quarries. There may be other geologic formations in the Dulles North area with economic potential for mineral extraction. Should the County allow mineral extraction or quarries in the Dulles North area?

Quarrying, which directly employs some 150 people, is an important basic industry in Loudoun County. A quarry is, however, a very difficult neighbor for residential, office, community commercial and recreational uses due to blasting, stone crushing noise, heavy trucks and equipment operation. The County may allow the development of quarries in the general employment areas of Dulles North. Mineral extraction will not be allowed in the community development areas nor in the prestige or "*Keynote*" employment areas. A reclamation plan with attendant financing method will be required from all quarry applicants. This reclamation plan

and financing vehicle will be designed to provide a stable and safe environmental situation in the quarry area after operations have ceased.

B. Policies

1. The County will not allow mineral extraction in the community development areas.
2. The County will not allow mineral extraction visible from the Route 7, Route 28 and the relocated Route 643/Dulles Toll Road Extended employment corridors.
3. The County will allow mineral extraction in areas designated for general industrial uses if the proposed activity demonstrates benefits to the local economy while ensuring protection of existing and planned neighboring uses from such dangers as economic, safety and health hazards and the environment from short and long-term degradation.
4. The County will adopt the policy of requiring a rezoning and special exception application for all mineral extraction proposals in areas designated for such use. The proposal will, furthermore, be accompanied by a geotechnical report detailing the following:
 - a. Description of the geologic formation and evidence of proven reserves.
 - b. The effects of extraction operations on groundwater supply sources using current industry-wide technologies and procedures.
 - c. The effects of blasting on nearby structures, uses or areas designated for community development or prestige employment areas.
 - d. The proposed program to monitor short and long-term damage to affected structures and groundwater supplies.
 - e. The proposed program and financing mechanisms of soil erosion abatement and eventual site reclamation designed to provide a stable and safe environmental situation in the quarry areas, although a complete restoration of the area to its former contours is not necessarily expected.
 - f. The phases of site development, the nature of noise and vibration abatement procedures, setback and buffer screen designs and the location of ancillary extraction or processing

operations such as concrete block manufacture and/or storage, or other activities such as hot bitumen preparation.

XIII. NOISE MANAGEMENT POLICIES

A. Issue Statement and Policy Resolution

Several low flying aircraft routes cross the Dulles North area. These routes will be used with increasing frequency in the future as operations at Washington Dulles International Airport expand. Growth in air traffic along these routes will accordingly result in a significant rise in ambient noise. Noise will also increase in those areas of Dulles North dedicated to industrial employment and along major traffic corridors. This increase in ambient noise will create an increasing nuisance to residential communities and could lead to human discomfort and/or depressed property values if not positively addressed. How should Loudoun County manage its planning efforts to reduce the negative effects of aircraft, transportation and employment noise on County residents?

The County will not permit the development of noise sensitive land uses in the air corridors used by low flying aircraft en route to or from Washington Dulles International Airport. Residential uses should be kept away from and/or protected from major collector/community "spine" roads. Buffer zones, berms and vegetation belts between conflicting uses will be the preferred technique of ensuring community harmony between uses which are not completely noise compatible.

B. Policies

1. The County will continue to negotiate with the Washington Dulles International Airport authorities to refine airport operations and aircraft arrival and departure routes in order to minimize the effects of noise on existing and future noise sensitive land uses.
2. The County will generally not approve the location of future residential land uses within the projected Ldn (*Loudness Day Night Index*) 65+ Noise Zones, as measured on the Integrated Noise Model, Mod 3.8, and as shown on Exhibit 15 of the "Final Report, FAR Part 150, Noise Compatibility Program, Washington Dulles International Airport", prepared for the Metropolitan Washington Airports Authority dated January 1985 and amended November, 1991 (See Figure 20, *Ultimate Airport Noise Contour*, page 41 and Figure 20A, *Ultimate Airport Noise Contour - 1991*, page 41A). The County will make an exception to this rule in the following cases:

- a. To complete residential subdivisions recorded before plan adoption.
 - b. To "fill-out" a new community where a natural feature or other factor would warrant a minor intrusion of noise sensitive land uses in the noise zones.
3. The County will institute review procedures for proposed new noise sensitive land uses located within the projected Ldn 65+ noise zone such as medical or other offices. Approval for noise sensitive uses will be subject in part to the installation of noise attenuation measures in the fabric of the structure.
4. The County will seek to buffer noise sensitive land uses such as residences from noise generating uses such as industrial employment in order to reduce noise based community frictions.
5. The County will establish appropriate buffering, berm and vegetation planting standards to minimize the effects of traffic or noise generating land uses on noise sensitive land uses.

XIV. VEGETATION AND WILDLIFE RESOURCE MANAGEMENT POLICIES

A. Issue Statement and Policy Resolution

To what extent should the County attempt to preserve the natural environment in its undisturbed state?

"Trees and other vegetation: help stabilize the soil and prevent erosion; decrease stormwater run-off and maintain water quality through canopy interception and root zone absorption; aid in energy conservation and human comfort through the moderation of temperature extremes and provision of shade and windbreaks; provide buffers and screens that help to reduce noise and air pollution; filter pollutants from the air; assist in groundwater recharge; contribute to the reduction of flood magnitudes; provide important psychological, social and aesthetic benefits in urban and suburban areas; function as integral components of the natural eco-system and serve as a habitat for various animal and bird species which in turn assist in the control of insect populations; and tend to conserve and increase property values." ²⁷

B. Policies

1. *" . . . It is the policy of the Loudoun County Board of Supervisors to preserve and protect the existing natural vegetation of the County to the maximum practical extent."* ²⁷

²⁷

Loudoun County Vegetation Preservation Policy adopted May 4, 1981.

2. *"The Loudoun County Board of Supervisors shall implement this policy by amendment to existing and adoption of new ordinances and regulations and by incorporation of adequate vegetation analysis into all aspects of the County planning, zoning and land development process."* ²⁷
3. Existing vegetation should be a significant factor when developers assemble a rezoning, subdivision, special exception or site plan proposal for County review. Furthermore, the County will weigh the conformance of a proposal with the existing vegetation in decisions to approve or deny the proposal.
4. Where existing vegetation is disturbed in development, indigenous species should be used in landscape restoration.

XV. HISTORIC RESOURCE POLICIES

A. Issue Statement and Policy Resolution

What efforts should be undertaken to conserve the area's archaeological and historic endowment while new development takes place in and around it?

New development which respects the forms, scale and textures of existing historic structures will be welcomed in the Dulles North area. The new development should be located in a way that will enhance the old, and be grouped in ways compatible with the existing pattern of dwellings, stores and community facilities. A clear spatial boundary between the new and the old such as a landscaped screen of vegetation is preferred. New developments in close association with the old should not generate negative offsite traffic, parking or other effects which would be detrimental to the archaeological remains, historic structures and general character of the area.

B. Policies

1. Individuals, organizations and groups will be encouraged by the County to preserve archaeological sites and historic structures and groupings of such structures possessing characteristics illustrative of the local cultural and architectural past and to carry out archaeological and historical research in the area. The County will aid such efforts by providing the use of its historic files and liaison assistance commensurate with the County's resources and ability to provide such aid.

2. Protection of archaeological sites and historic structures and groups of structures will be sought and encouraged by the County at the time of land rezoning, subdivision, special exception and site plan review and development.
3. Compatible design of new development on land adjacent to archaeological sites and historic structures and groups of structures will be sought and encouraged by the County at the time of rezoning and development review.
4. A transition zone between new development and archaeological sites and historic structures and groups of structures will be sought by the County during review of new development proposals. The retention of adjacent existing woodlands and/or vegetative screens will be strongly encouraged.
5. The County will analyze new development proposals located in and around archaeological sites and historic structures and groups of historic structures at the time of rezoning and development review of identify any negative off-site traffic, parking or other effects and will encourage the abatement and/or elimination of such undesirable impacts.
6. An archaeological inventory of the Dulles North planning area will be compiled by the County as resources are available.

APPENDIX

PUBLIC AND PRIVATE SECTOR POLICY GUIDELINES FOR THE FINANCING OF CAPITAL FACILITIES AND UTILITIES

A. Issue Statement and Policy Resolution

If the Dulles North planning area were developed as outlined in this plan, two key questions would be raised:

1. What would the County need to spend in order to support development in Dulles North with a full complement of essential public facilities and utilities?
2. How does the County propose to pay for these expenditures?

Residential development in Dulles North may range from 11,600 to 29,200 dwellings. Thus, the necessary public facility requirements to support these dwellings will accordingly vary greatly. Table 1 provides an estimated cost profile in 1985 dollars of one possible scenario, based on a density of 3.3 dwellings per acre, and based on the assumption that 10,800 single-family detached houses, 10,800 townhouses and 2,400 apartments and 43,000 jobs would be located in the planning area.

Table 1, page 92, reveals that supporting private development with all the necessary public facilities and utilities will require very substantial expenditures. The current and projected operational funding capabilities of the County, the Virginia Department of Highways, the Northern Virginia Regional Park Authority and other public agencies are and will be insufficient to provide private development with all the public facilities and utilities identified in this plan. However, major delay in the provision of such facilities and services would seriously hamper the marketing, sales and revenue projections of the private development sector. Consequently, the County anticipates that the development community will cooperate with the public sector in the provision of public facilities and utilities identified in this plan.

Table 1 illustrates the unit cost for each new residential dwelling for education, fire and rescue, schools, and other public costs. This type of information allows the County to carefully review the potential fiscal impacts of a residential development proposal on the community in which it would be located and on the whole County. New residential projects need to provide their fair share of funding to assist in providing these public facilities if such facilities are to be created in a timely fashion.

TABLE 1²⁸				
AREA CAPITAL FACILITY AND UTILITY COSTS				
Item	Total Cost	Total Res. Cost	Unit Cost Per Dwelling	%
Education	\$164,209,000	\$164,209,000	\$6,840	74
Government	13,937,000	11,707,000	490	5
Judicial	8,278,000	6,209,000	260	3
Fire Rescue	3,367,000	1,884,000	80	--
Library	9,388,000	9,106,000	380	4
Recreation	22,381,000	22,381,000	930	10
Sanitary Landfill	8,585,000	6,604,000	280	3
Subtotal	\$227,862,000	\$222,100,000	\$9,260	100
Sewage Treatment ²⁹	\$43,354,000	\$30,967,000	\$1,290	
Roads ³⁰	\$143,125,000 (+ land for road r-o-w)	\$71,525,000 (+land for road r-o-w)	\$3,000 (+ land for road r-o-w)	
Total	\$414,341,000 (+ land for road r-o-w)	\$324,592,000 (+land for road r-o-w)	\$13,550 (+land for road r-o-w)	

The proffer system made available through the rezoning process provides developers with a mechanism to provide funding which will assist in meeting the public facility and service needs of Table 1 which their projects generate. The County further anticipates private sector assistance in the provision of necessary public facilities and utilities such as fire/emergency rescue stations or roads from developers of nonresidential/ employment uses. The extent of such assistance is

²⁸ Table 1 is reproduced from a memorandum dated August 12, 1985 from Richard Calderon and Milton Herd, to Philip A. Bolen: *"Capital Costs Associated with Development of the Dulles North Planning Area."*

²⁹ The costs here represent just the construction of the sewage treatment facility for Dulles North and assume that the Blue Plains wastewater treatment plant will lack the capacity to serve the planning area. The costs of building major sewer trunk lines are not included nor is land acquisition since these costs are shared by developers in the private sector.

³⁰ Public road construction and funding is the responsibility of the Virginia Department of Transportation.

expected to be a factor of the public facilities and utilities needs generated by each nonresidential/employment project.

The County anticipates that the balance of these public facilities costs will be borne out of the operational revenues, user charges and debt service funds of the various public agencies.

B. Policies

1. The County anticipates that the provision of public facilities and utilities in the Dulles North planning area will be a joint effort on the part of the public and private sectors.
2. The County will consider development community proposals of cash and in-kind assistance in the provision of needed and mandated public facilities identified in the adopted Comprehensive Plan.
3. The County expects that proposals of public facilities and utilities assistance by residential developers would be in conjunction with their requests for development approval of residential dwelling densities above this plan's adopted density base of 1.6 dwelling units per net acre.
4. To assist the County in an equitable and uniform evaluation of developer proffers and other proposals for densities above a reasonable base of 1.6 dwellings per net acre which otherwise conform with this plan's policies, the County will establish the following guidelines:
 - a. Developer assistance valued at 20% of capital facility costs and 10% of major road costs per incremental dwelling unit above the base density of 1.6 dwelling units per net acre would merit additional density of up to 0.4 dwellings per net acre for a maximum density of 2.0 dwelling units per net acre.
 - b. Developer assistance valued at 25% of capital facility costs and 15% of major road costs per incremental dwelling unit above the previously reached density of two dwelling units per net acre would merit additional density of up to 0.4 dwellings per net acre for a maximum of 2.4 dwelling units per net acre.
 - c. Developer assistance valued at 30% of capital facility costs and 20% of major road costs per incremental dwelling unit above the previously reached density of 2.4 dwelling units per net acre would merit additional density of up to 0.4 dwellings per net acre for a maximum density of 2.8 dwelling units per net acre.

The County will also consider two categories of density increments associated with the provision of major roads and residential density transfer. These incremental densities may be applied at levels a., b., or c.

- d. Developer assistance valued at 30% of capital facility costs and 100% of major road costs per incremental dwelling unit would merit a density increment of up to 0.6 dwellings per net acre.
- e. A density increment of up to 0.6 dwellings per net acre would be granted in return for developer evidence of participation in land conservation efforts associated with transfer of development density.

The number of incremental transfer units or credits will be determined by the County's TDR overlay district regulations. Until such regulations are adopted, the standards set forth in the Rural Land Management Plan will apply.

- 5. The County will fund the balance of the capital facility and utility expenditures and the operational service expenditures associated with them according to existing countywide fiscal policies adopted by the Board of Supervisors on December 17, 1984 or as subsequently amended.

TABLE 2**WORKSHEET EXAMPLE****AN EXAMPLE OF PROPOSED DENSITY/PROFFER RATIOS ON
A HYPOTHETICAL TRACT OF LAND OF 800 NET DEVELOPABLE ACRES**

The worksheet below traces one possible density/proffer option between a developer and the County regarding a hypothetical tract of land in the Dulles North area. The County first granted the developer a base density of 1.6 dwellings per net acre or 1,280 units and was subsequently proffered \$688,000 for an additional 320 units. In succeeding negotiations the County was proffered \$883,840 and \$1,079,680 in return for 640 additional units. This brought the overall density to 2.8 dwellings per net acre. The developer lastly offered to purchase 240 TDRs valued at \$1,200,000 and to place \$2,305,600 in the County's Road Trust Fund in return for 400 bonus dwelling units.

The worksheet scenario thus concludes with the developer obtaining 2,880 dwelling units or a density of 3.6 dwelling units per net acre in return for a proffer package valued at \$6,157,100.

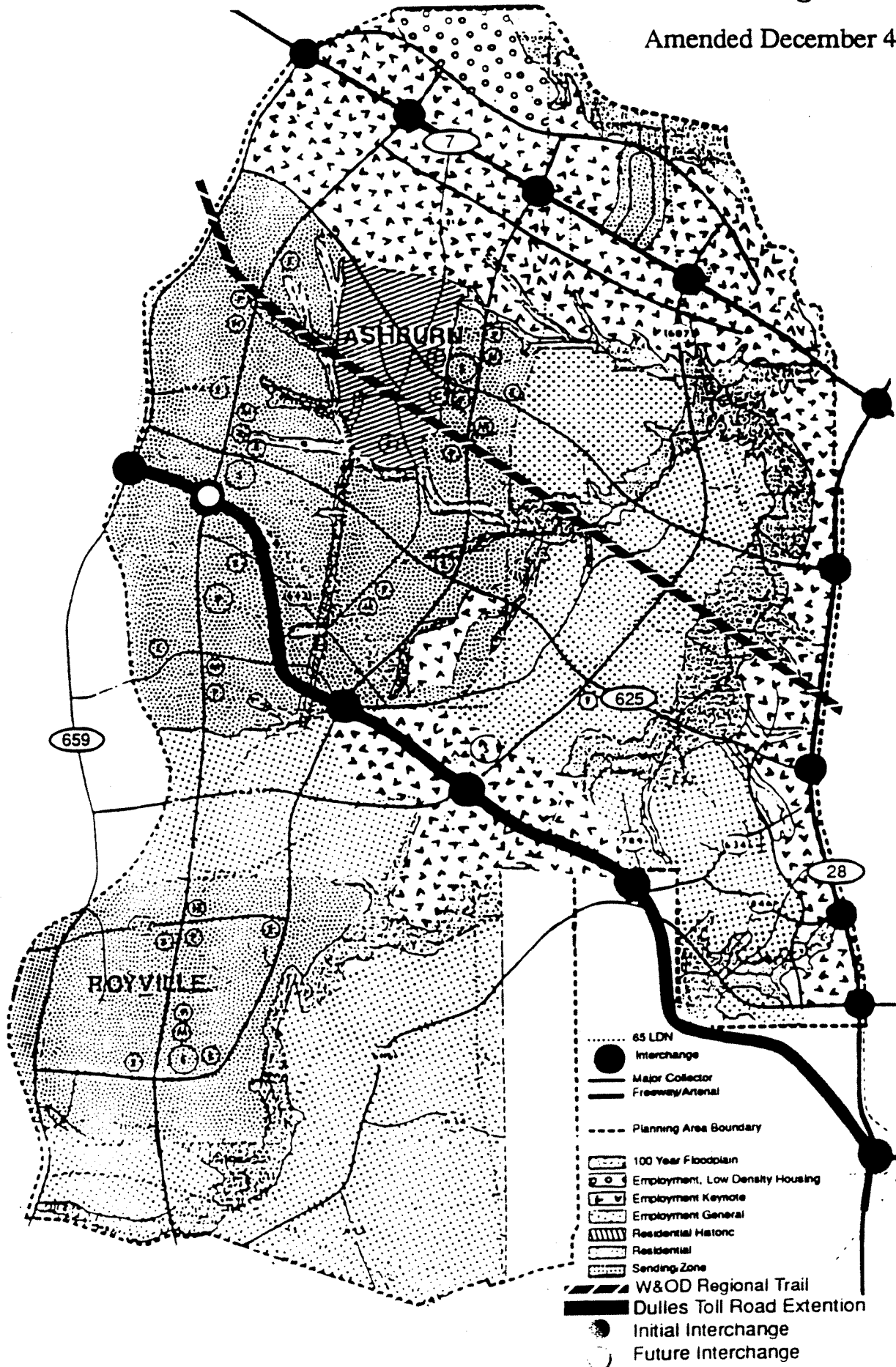
Additional Units	Total Units	Increment Per Lot	Additional Proffer	Cumulative Proffer	Average Proffer Per D.U.
Base 1,280 1.6 d.u./ac.	1,280	0	0	0	0
a. 320 1.6-2.0	1,600	\$1,851 facil. \$293 roads	\$688,000	\$688,000	\$430
b. 320 2.0-2.4	1,920	\$2,314 facil. \$448 roads	\$883,840	\$1,571,840	\$819
c. 320 2.4-2.8	2,240	\$2,776 facil. \$598 roads	\$1,079,680	\$2,641,520	\$1,184
Roads 400 ³¹ 0.5	2,640	\$2,776 facil. \$2,988 roads	\$2,305,600	\$4,957,120	\$1,878
TDRs 240 ³⁵ 0.3	2,880	\$5,000 ³²	\$1,200,000	\$6,157,100	\$2,138

³¹ While the plan makes provision for a maximum of 0.6 d.u./ac., in the example of the Road Trust Fund is assigned 0.5 d.u./ac. and TDR is assigned 0.3 d.u./ac.

³² A TDR is assumed to be valued at \$5,000.

Dulles North Area Management Plan

Amended December 4, 1990



ROUTE 7 CORRIDOR PLAN

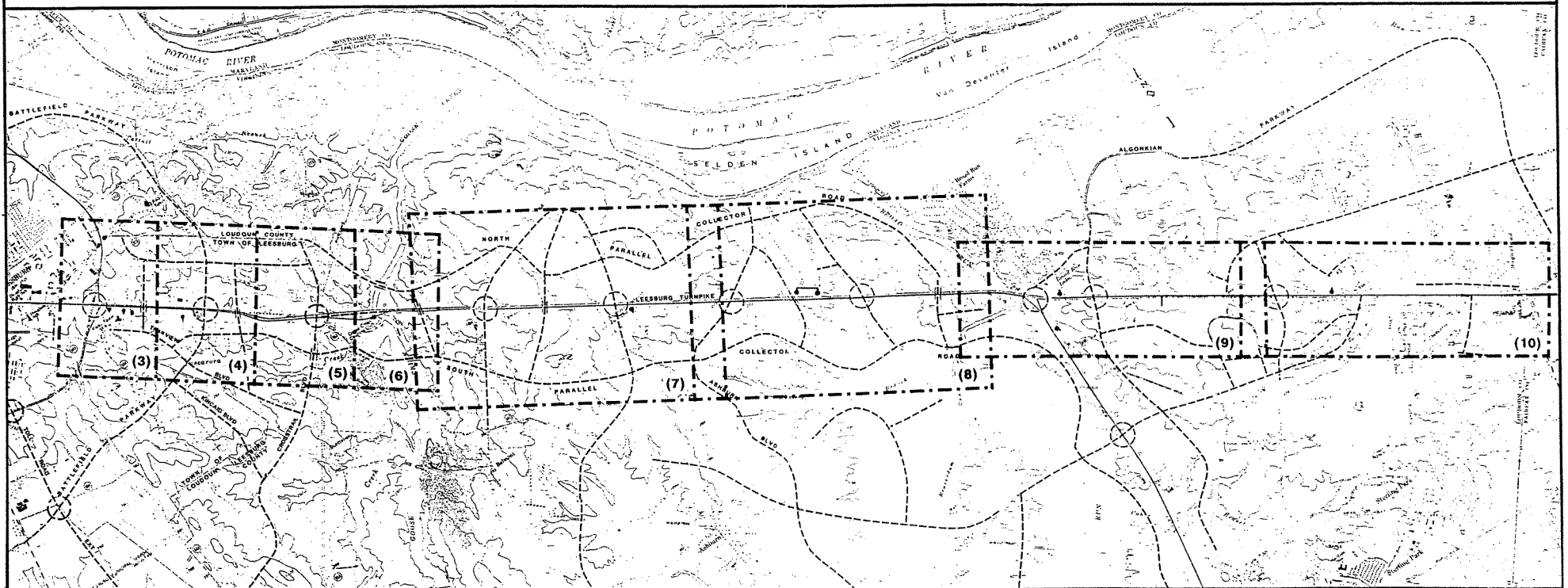
LEESBURG PIKE LOUDOUN COUNTY

FROM: INTERCHANGE ROUTE 7 & 15

TO: LOUDOUN - FAIRFAX COUNTY LINE



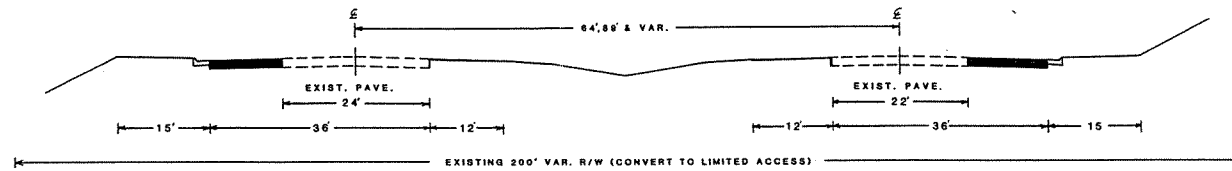
Prepared by: Transportation Planning Division With assistance from the Town Of Leesburg and Loudoun County Planning Departments
FEBRUARY 1990



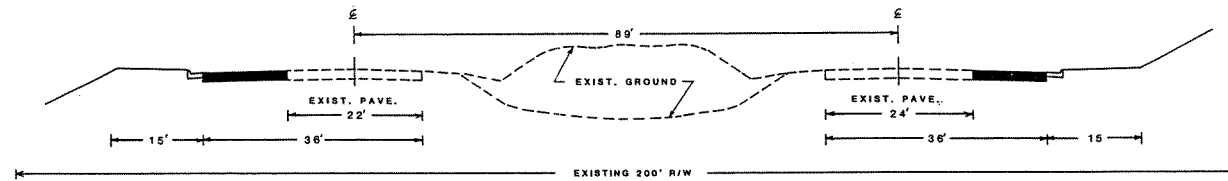
CONCEPT PLAN SUBJECT TO CHANGE

PROPOSED TYPICAL SECTIONS ROUTE 7 CORRIDOR PLAN

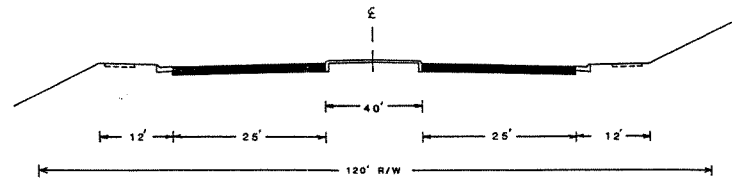
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TO: ROUTE 28 INTERCHANGE



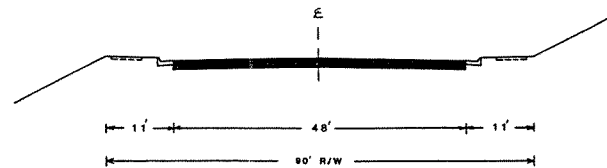
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TO: LOUDOUN-FAIRFAX CO. LINE



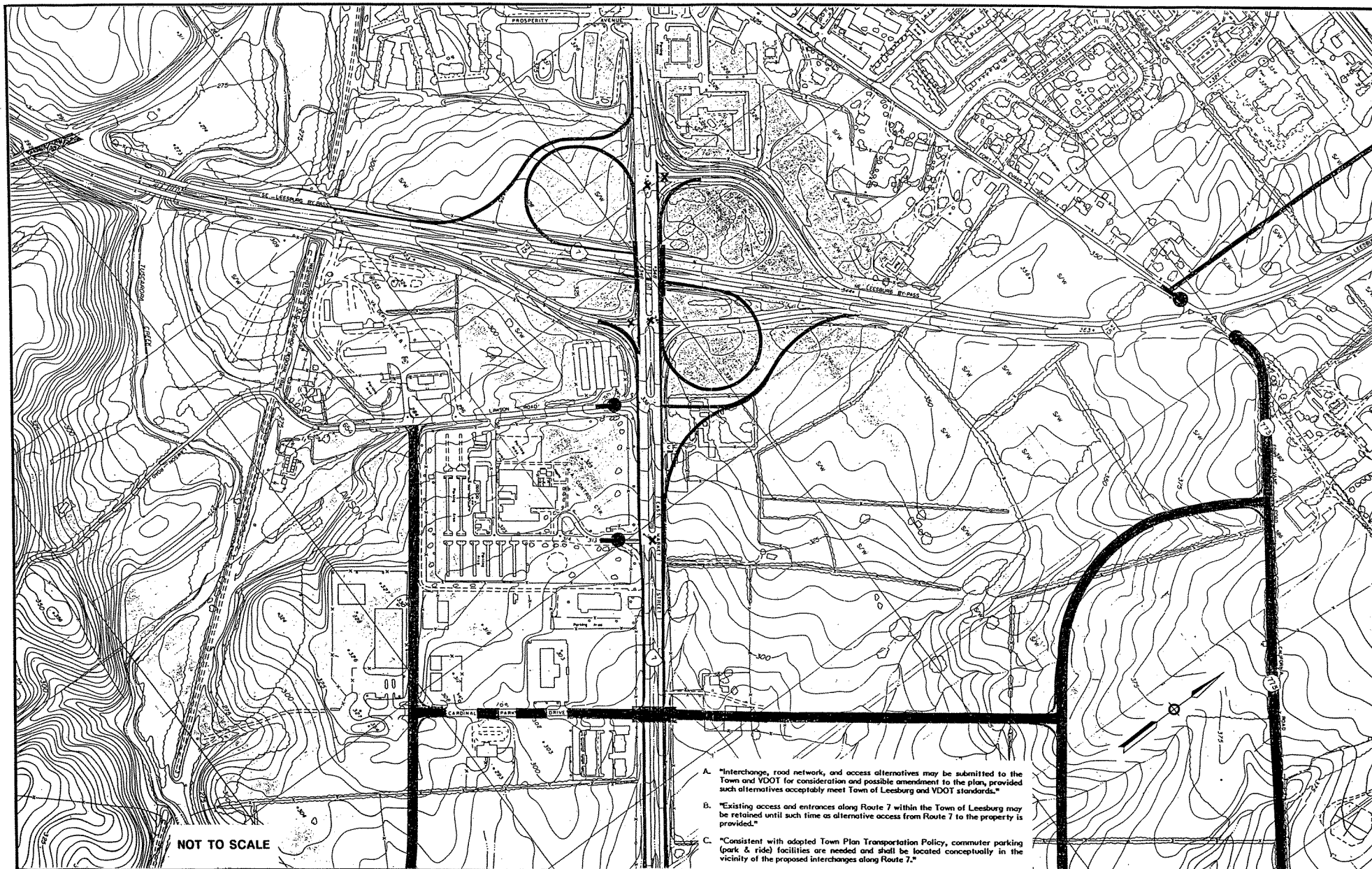
PARALLEL COLLECTOR ROADS AND
NORTH/SOUTH COLLECTOR ROADS

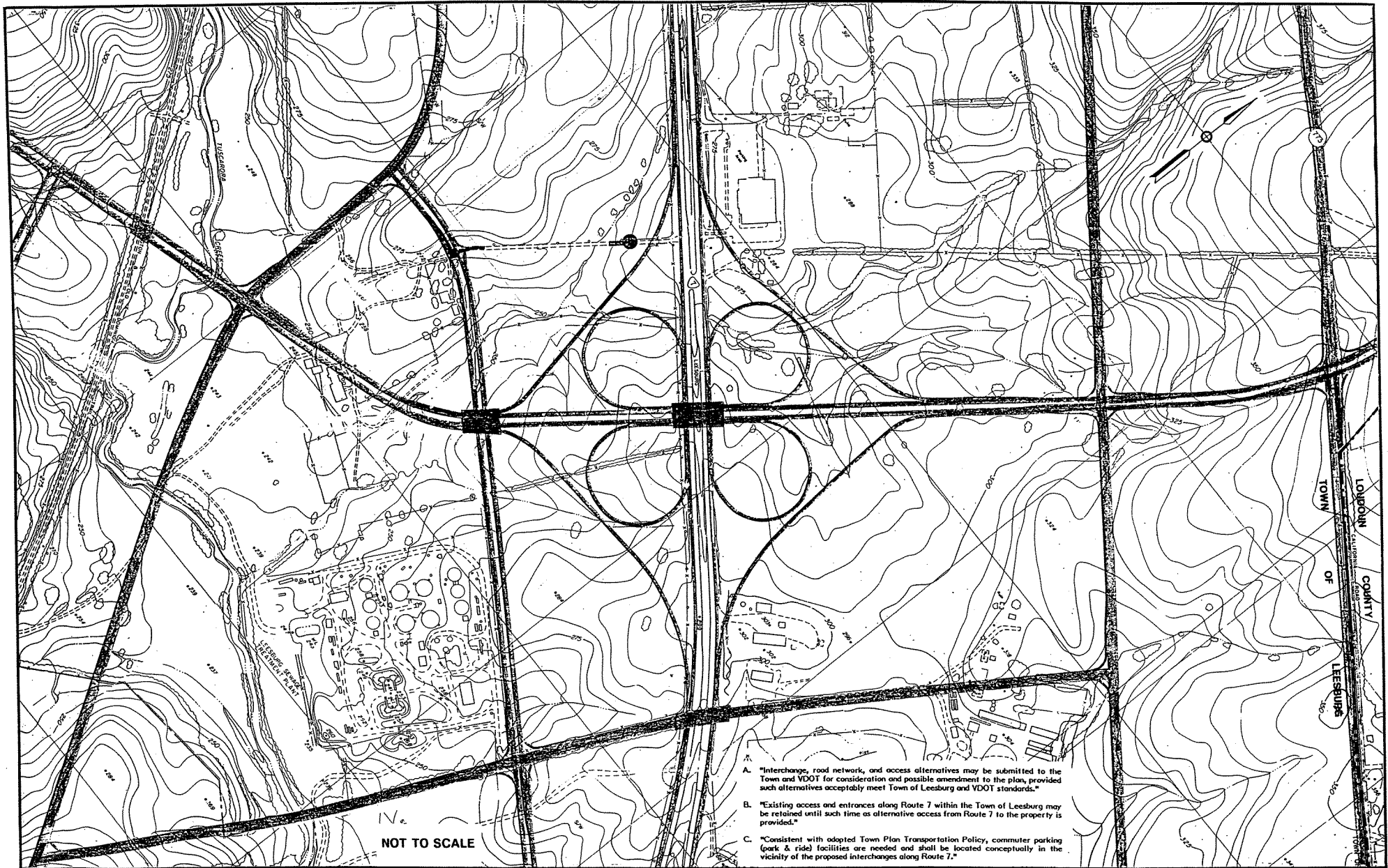


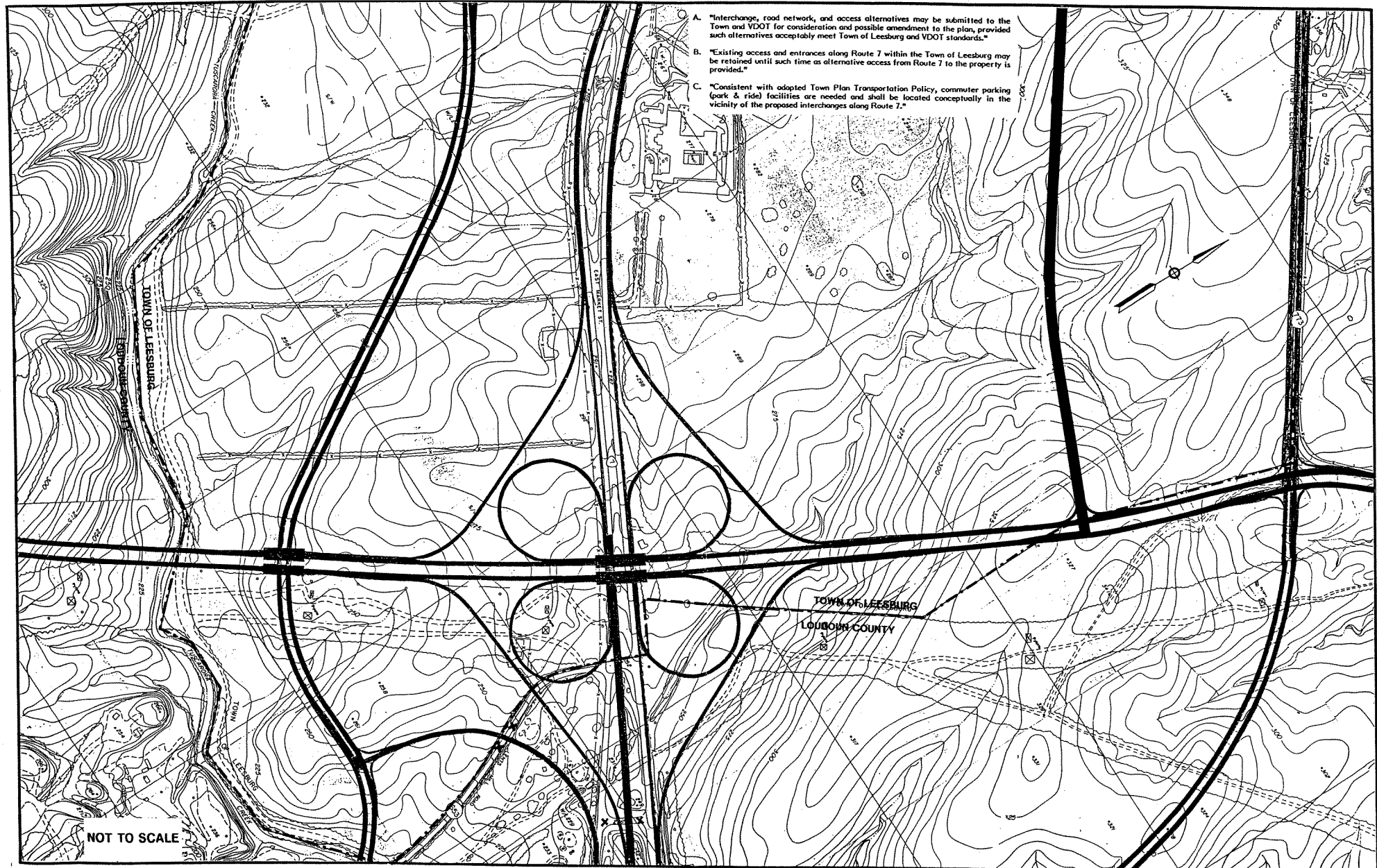
NORTH/SOUTH CONNECTOR ROADS AND SERVICE ROADS
(width, including number of lanes, may vary)



SEPARATE TURN LANES MAY BE REQUIRED AT MAJOR INTERSECTIONS

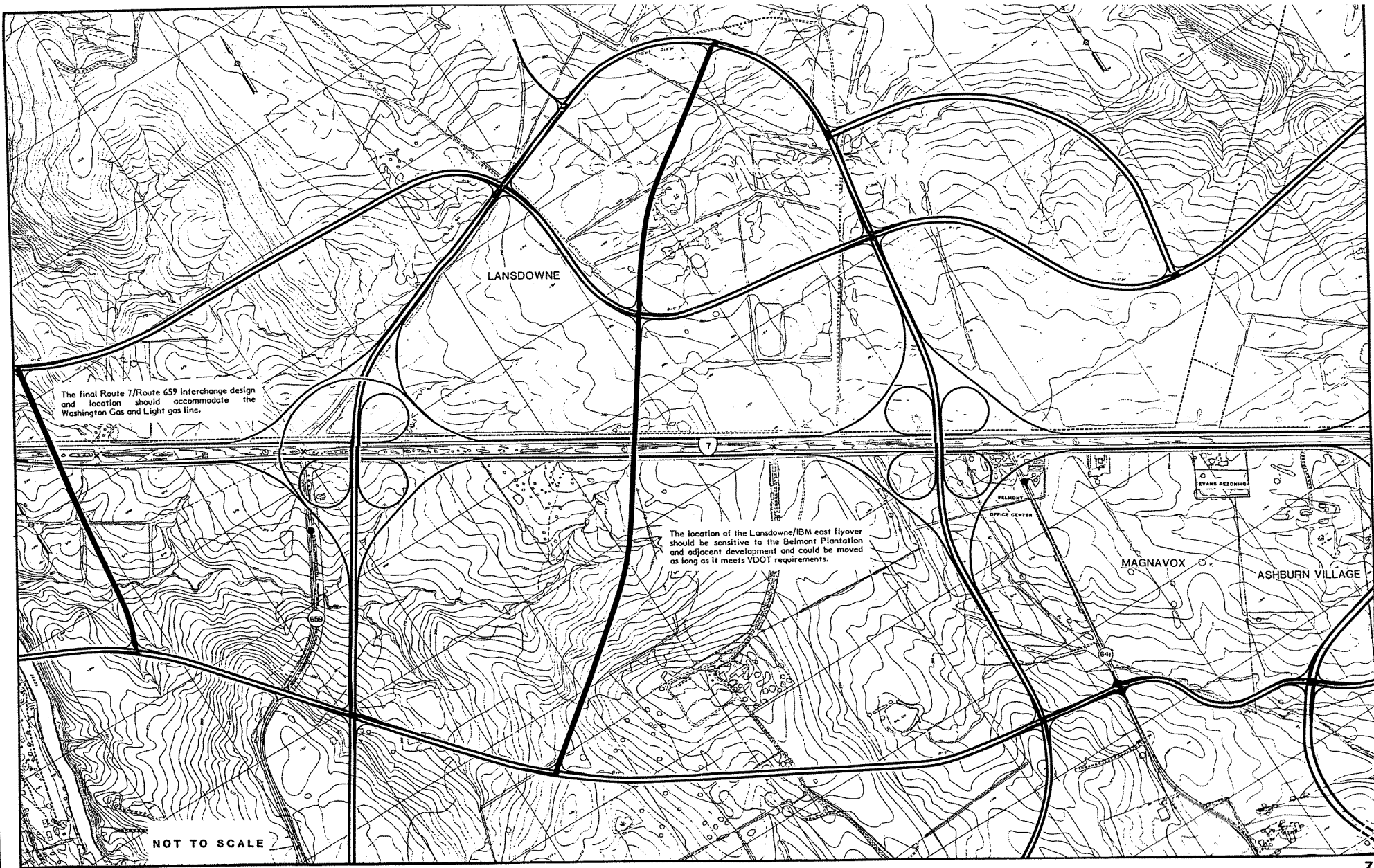


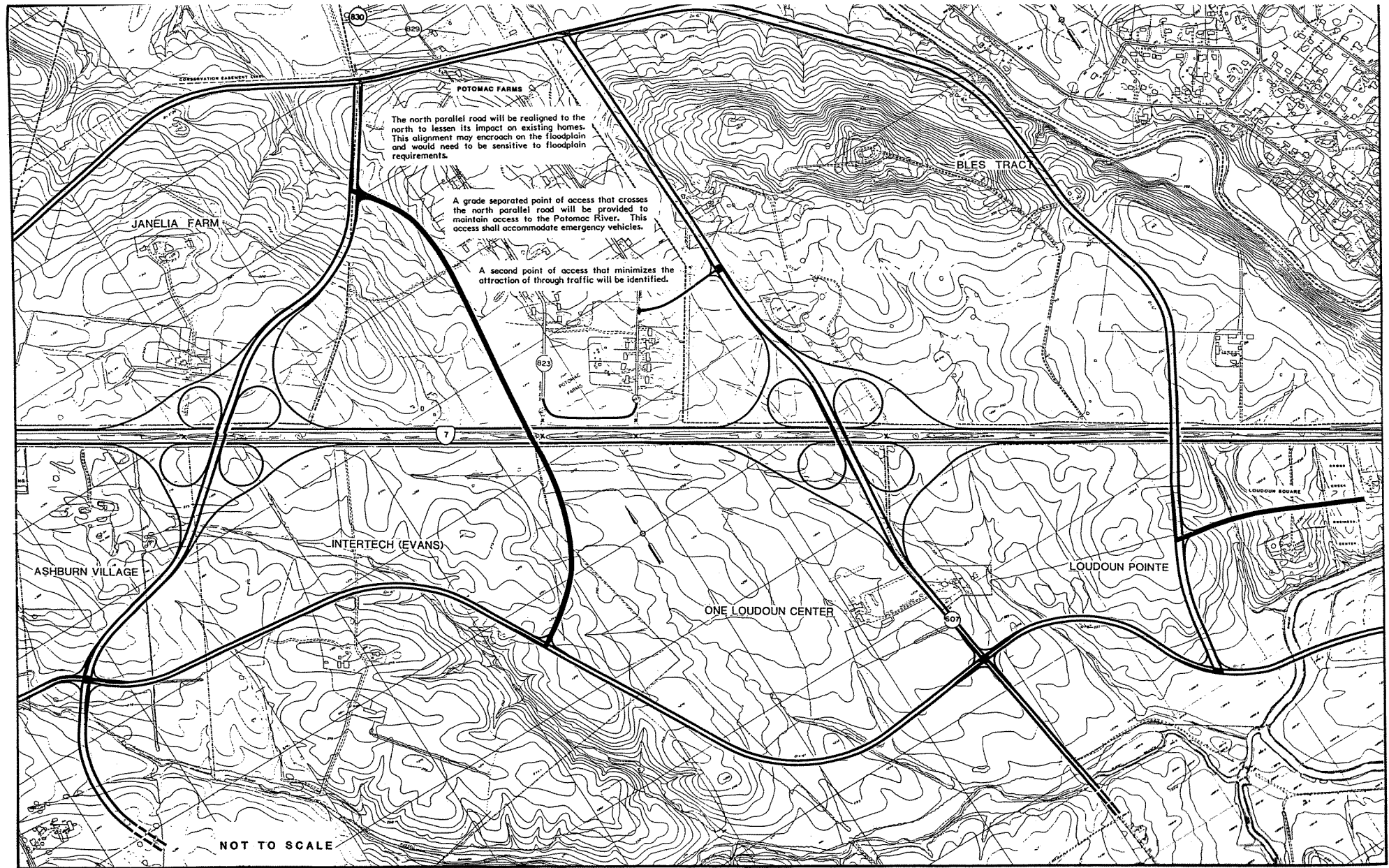




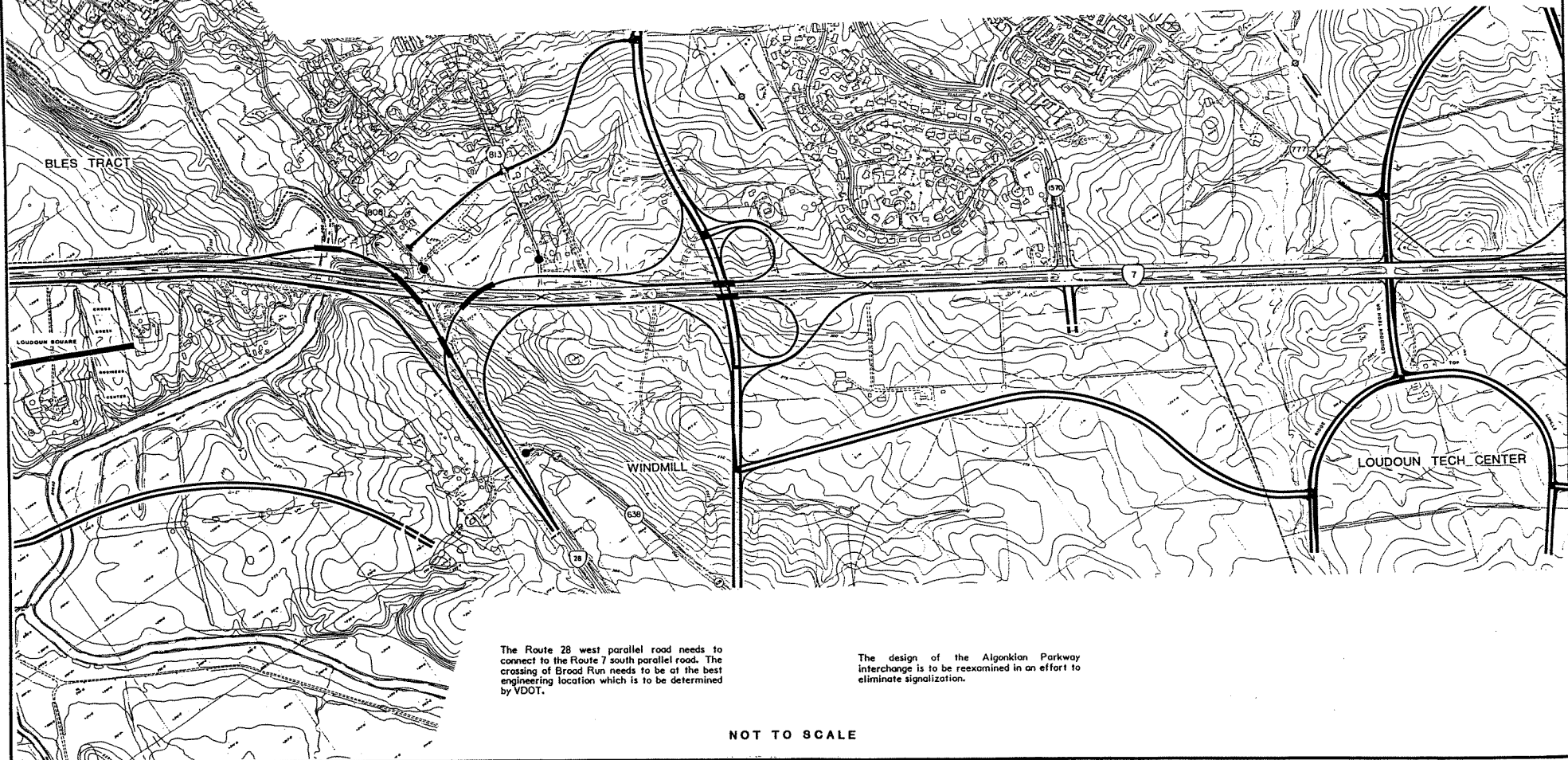
"The County endorses the continuation of a limited access condition for Route 7 east to the Leesburg Corporate Limits. The future of the Route 653 access will be addressed jointly with the County of Loudoun, the Town of Leesburg and the Virginia Department of Transportation."

NOT TO SCALE





Prior to the Phase II Route 7/Route 28 interchange construction which eliminates direct access to the Broad Run Farms community, the location of a second point of access to the community must be identified.



The Route 28 west parallel road needs to connect to the Route 7 south parallel road. The crossing of Broad Run needs to be at the best engineering location which is to be determined by VDOT.

The design of the Algonkian Parkway interchange is to be reexamined in an effort to eliminate signalization.

NOT TO SCALE

For the north service road, alignment adjustments and buffering should be used, at the site plan stage, to minimize impacts on residential areas and the lake.



NOT TO SCALE